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THE EDITOR'S COLUMN

JAMES H. SCHILT, ASA, CFA

Christopher Mercer said in his "Not So Random Thoughts Regarding The Business of Business Appraising" (Business Valuation Review, June 1988, page 62), "Make it a regular practice to go back and re-read your older appraisals if you need an occasional object lesson in humility." We not only do this, but go back and re-read many of the articles published in this journal to ensure retention of some good ideas put forward by our contributors. One such article, that not only is short and easy to read, but is full of wisdom on a subject that confronts us daily: capitalization and discount rates. The article in question is, "Myths About Capitalization Rate and Risk Premium", by T.S. Tony Leung, ASA, (Business Valuation Review, March 1986, page 6). We have a feeling that the article in the present issue by Eric Nath regarding control premiums may also fit in the re-read category at some later date (possibly along with critical comments from our readers).

* * *

In our March 1990 Editorial we offered to buy a drink for the first person to come forward with what the MSA and DREI designations stand for as these were held by the Lincoln Graduate Center's business valuation instructor. The Dean of the School of Real Estate at the center (the institution that issues "board certification" for business appraisers) advises us that the initials represent Master Senior Appraiser (real estate) and Designated Real Estate Instructor, respectively. In our March 1988 issue we reported a count of fifteen sets of initials for real estate appraisers, and stated that the actual number may be substantially higher. Here are two more!

* * *

Note to Contributors: All manuscripts must be sent to the Editor in five copies double spaced with author(s) name and designation on the title page. Please include a brief personal biography at the end of the manuscript. Authors should remember that most of our readers are familiar with the standard methods of business appraisal and this area does not require explanation. Authors are requested not to submit manuscripts that are being reviewed for possible inclusion in other journals. Reprints of articles are now available to authors (see announcement elsewhere in this issue).

Note to Readers: Requests for back issues and payment for subscriptions should be sent to the publishing office in Denver and not to the Editor. It has been suggested that we review new software that may be of use to business appraisers. Accordingly, your comments are solicited either in a letter to the Editor or in the form of a short article. We also request that you call our attention to newly published books and articles of particular interest that relate to business valuation.

CONTROL PREMIUMS AND MINORITY INTEREST DISCOUNTS IN PRIVATE COMPANIES

by ERIC W. NATH

Section I. INTRODUCTION

One common methodology for obtaining the fair market value of a minority interest in a private company is to correlate the valuation multiples of comparable public companies with the subject private company, then apply a discount for lack of liquidity. A minority interest discount for lack of control is generally not applied on the theory that lack of control is already accounted for in the fact that public stocks are traded as minority shares.

A reciprocal theory is sometimes used if a private company controlling interest is being evaluated. Here, comparable public companies are analyzed relative to the subject, then a control premium is estimated and applied. (Although not common, a discount for lack of liquidity is sometimes included to account for the relatively greater difficulty in selling a private company versus a public company.) The theory underlying this approach is that since publicly-traded stocks are traded on a minority interest basis, and there is a long history of control premiums that have been paid by acquirors to gain control of public companies, then all public minority shares must have some intrinsic discount for lack of control. Consequently, some premium must be required to convert a minority interest value, derived from the public market, to a controlling interest value.

For those appraisers who use the discounted cash flow approach, I have not read a definitive statement yet as to whether discount rates derived from the market (through the Capital Asset Pricing Model or Arbitrage Pricing Theory) are minority interest discount rates or majority interest discount rates. To my knowledge, the general consensus among appraisers is that a market-derived discount rate is a minority interest discount rate, based on the same reasoning as above, i.e. public shares trade as minority interests.

In the context of the public market, what does a control premium really mean? It means simply that a company is worth more to another individual or entity than to the current public shareholders. What has puzzled me for some time is if public stocks always trade at a discount to their controlling interest value, then why aren't they taken over? If they truly are intrinsically worth more to someone else, surely that someone else will step forward and offer at least some premium for the privilege of owning the whole company. The fact that there are hundreds of billions, and perhaps trillions of dollars scouring the market for acquisition targets (LBO funds, domestic and foreign strategic buyers, and the bankers who fund them) makes it inconceivable that any good takeover opportunity will remain unmolested for long. As blood attracts sharks, a significant difference between the current price of a stock and its value to a controlling owner should trigger some form of takeover attack.

(A caveat to the preceding statement: In recent months several states, most notably Pennsylvania, have enacted legislation designed to protect managements and thwart takeovers, thus increasing the likelihood that a differential between takeover values and trading values could exist for companies registered in these states.)

In the balance of this article I will to argue that most public companies today tend to trade at or near their takeover, or controlling interest, values. If this can be demonstrated, then valuation based on an analysis of public companies should yield a controlling interest value, not a minority interest

value. Furthermore, market-derived discount rates used for discounting future cash flows will be controlling interest discount rates, yielding controlling interest value.

If the argument can be made that public stocks tend to trade at or near their takeover value, then valuation of a private minority interest using publicly-traded stock multiples or discount rates will require discounts for both lack of liquidity and lack of control.

I have based my analysis, in part, on information from W.T. Grimm, Mergers and Acquisitions Magazine, and the ADP Mergers and Acquisitions database. I made no attempt to independently verify information from public sources, nor did I try to reconcile differences in data from these sources with similar data from other sources. Therefore, data used in this report may differ somewhat from data developed through other sources.

Section II. CONTROL PREMIUMS IN PUBLIC COMPANIES

What are "Control Premiums" in public companies and why do they exist?

In the public market setting, a so-called "control premium" results when a publicly-traded company is purchased for a price that exceeds its prevailing trading price. The takeover of RJR Nabisco (RJR) by Kolberg, Kravis & Roberts (KKR) in 1988 is a classic example. Prior to any takeover activity RJR was trading for approximately \$50/share. A proposal by management to take the company private in a leveraged buyout for \$90/share put the company into play and started a bidding war. Ultimately, KKR purchased the company for \$109/share. The increase in share price for those shareholders who remained invested through the buyout process was approximately 118%. This increase is commonly referred to as the "control premium," since it represents the premium over the prevailing market price that was paid to gain control of the company from a diverse group of minority shareholders.

In the case of RJR/KKR, the deal was "financial" in that the acquisition possessed few compelling strategic advantages for the buyer. In contrast, a 1988 buyout of great strategic importance occurred when Bridgestone Corporation bought Firestone Tire and Rubber at a premium of approximately 140% over the previously unaffected trading price.

How can buyers justify paying such enormous premiums? There are several answers:

1. The target company's shares may be "undervalued" if the company is mismanaged or otherwise underutilized. To an entrepreneur, such a situation may represent an opportunity to realize a sizeable return if the company can be purchased, even at a premium, and run more efficiently (a la RJR).
2. On the other hand, the company may be very well run and shareholder value may be maximized, but this fact may not be communicated effectively to the stock market by management. Because the market does not fully understand management's plan for the company it may not value the shares high enough, again representing a financial takeover opportunity.
3. For those companies whose management is maximizing shareholder value, and this is being communicated effectively to the market place, the company may still represent a good takeover candidate for the strategic acquiror. Access to new markets, new technologies or other synergistic benefits may make paying a premium worthwhile to the strategic buyer.
4. And, from time to time, there may indeed be a greater fool who pays too much. Mr. Campeau's troubles with Federated Department Stores is a current example.

I call the first three categories "Primary Takeover Requirements." If a public company does not meet any of these Primary Takeover Requirements, I believe there is little reason to suspect it will be taken over. Why should it be? After all, no one else can make the company run any better, nor

squeeze out any more earnings or cash flow, and the stock is correctly priced (assuming a relatively efficient market).

Absent the required takeover conditions in a public company, therefore, it would seem that a control premium would not exist or would be too small to make it worth anyone's time or money to attempt a takeover.

Indeed, corporate managements in recent years have expended large amounts of time and money restructuring their companies in order to avoid being taken over. In effect, restructuring does nothing more than reduce or eliminate whatever potential control premium may exist that might attract an attack.

If the analysis above is correct, then the only conclusion to be drawn by the appraiser is as follows: any public company being used as a comparative that is not currently "in play" as a takeover target must be assumed to have no control premium, or at least one that is so small as to be immaterial. (Even the price of takeover stocks should presumably reflect takeover value since any takeover offer is evaluated by the market relative to the probability of completion, and bid up to a point that reflects that probability.)

The logical extension is that a valuation of a private company based on non-takeover comparatives will be a "majority interest" valuation, not a "minority interest" valuation. To conclude otherwise, it would seem to me that the appraiser would have to be able to demonstrate irrefutable evidence that the particular comparative stocks being used in the appraisal are "underpriced". Furthermore, some evidence should be submitted as to the estimated amount of undervaluation of each comparative since each stock will presumably be undervalued to a different degree. Only after the takeover value of each comparative has been determined, and valuation multiples recalculated, can some correlation between the valuation multiples of the comparatives be made with the subject. Given a relatively efficient public market, and the subjectivity that would have to go into the determination of specific control premiums for an entire portfolio of comparable public companies, I would think this course of analysis would be impossible to support in all but the most clear cut circumstances.

For those of you who remain unconvinced by such compelling logic, the following are some observations about control premium data which have increased my scepticism about relying on this information when preparing an opinion of fair market value.

Problem #1. Takeovers represent a tiny portion of the public marketplace and are not representative of the vast majority of public companies which are used by appraisers as comparatives.

Table 1 shows that, in 1989, companies representing only about 3.5% of total public equity dollars traded on the three major exchanges were purchased in merger and acquisition transactions. For 1988 and 1987, takeovers accounted for only 4.0% and 3.2% respectively of total public equities. Thus, in 1988, the most active year for takeovers in this study, fully 96% of public stocks were not taken over in a merger or acquisition transaction. Even assuming that all takeovers are consummated at a premium over market, which is not true, this would indicate that takeovers and control premiums represent a very small portion of overall activity in the marketplace. Indeed, if the extraordinary \$24.7 billion RJR Nabisco transaction is removed from the 1989 date, last year's takeover activity was anemic in comparison with previous years. Additionally, the first five months of 1990 have witnessed M&A activity proceeding at a snail's pace despite a robust stock market.

If the central hypothesis is correct, then virtually all public companies used by the appraisers as comparatives probably have little or no associated control premium, so valuations based on these comparatives will be controlling interest valuations.

Problem #2. Most takeovers are probably motivated (at least partially) by strategic considerations, calling into question their applicability for appraising "fair market value".

To cite W.T. Grimm, less than 27% of acquisitions of companies in 1988 were "going-private" transactions. Going-private transactions are essentially economic transactions, i.e. leveraged buyouts by management, employees, ESOPs or private investment groups. By exclusion, the remaining transactions were not "going private" transactions, i.e. the target was presumably purchased by another public or private company. Because most corporate acquirors have some strategic purpose in mind when making an acquisition, this would indicate that the bulk of takeover activity probably has at least some strategic focus.

Without being able to cite any hard data as of this writing, the trend in the last year seems to be away from financial engineering and toward the strategic buyer. This has been especially true since the United Airlines ESOP fiasco in 1989.

Premiums paid in strategic acquisitions represent something of a problem for the appraiser if he or she is trying to ascertain "fair market value". The concept of "fair market value" requires the assumption of a "willing" (i.e. hypothetical) buyer. A hypothetical buyer is one who will presumably buy on the basis of earnings, cash flow, assets, and the risk of the business. Assumptions as to what benefits could or could not be achieved through a particular combination with a particular buyer are not permitted.

The problem arises here because the strategic buyer is not just a hypothetical buyer, and the target is not being bought based on its existing economic configuration.

Thus, even if an appraiser insists on using control premium data, these data will be basically invalid for purposes of determining fair market value since most takeovers are strategic in nature.

Problem #3. Control premium statistics can be very misleading.

A review of Grimm's Transaction Roster for 1988 reveals a grim phenomenon. In some cases "control premiums" are actually negative! A number of targets actually sold for prices below their previously "unaffected" trading value. For example, Grimm indicates outright discounts occurred in the takeover of Brokers Securities, Inc. by Fleet Financial (-31%) and the Iroquois Brands purchase of Portec, Inc. (-21%). There may have been reasons for these discounts, such as a decline in the market, or a deterioration of the targets during the takeover process. Nonetheless, it creates doubt for all those who believe the takeover of a public company will always result in a control premium. I did not conduct an exhaustive review of control discounts, so there may have been transactions with even deeper discounts in 1988.

Most appraisers cite the average premium paid in takeovers over a given period, or perhaps refine the process by focusing on premiums paid in a particular industry. Grimm, in calculating control premium averages, uses only those transactions with positive premiums. The results would probably be skewed significantly lower if all transactions were to be included in the averages.

Additionally, the enormous range in premiums is a big red flag, warning against too much reliance on any of this data. On the high end for 1988 Grimm reports a 540% premium paid by Halliburton Co. for Gearhart Industries, Inc., while reporting a low end premium of only .16% paid by Linc Group, Inc. in its acquisition of Scientific Leasing, Inc. Of course, since the statistics exclude negative premiums, the reported low end does not include the discounts realized by the buyers in the Brokers Securities and Portec transactions.

Grimm's control premium averages are simply arithmetic averages with no additional analysis based on market-value weightings. Thus, Lilliputian deals carry as much weight as the Brobdingnagian.

Problem #4. Premiums are also paid for minority interests.

Grimm's review of market data reveals another interesting phenomenon. While the average premium paid over "unaffected" market value for controlling interests in 1988 was approximately 42%, the average premium paid over market for minority blocks (10%–49%) in negotiated transactions was about 59%. In 1989, the average minority block premium dropped back down to 27% while controlling interest premiums remained at 42%.

The record is clear that minority interest blocks can also command a premium over market. In certain cases this may be because some amount of control is conferred with the sale, such as a seat on the board. However, the amount of control conferred with any minority stake is generally insignificant to the control available to majority interest holders.

Problem #5. The takeover market can be unreliable as an indicator of true value compared to other approaches.

At least two problems are present when using the takeover market as a proxy for fair market value of a subject private company: i) takeover transactions are unique and time-specific, as opposed to the stock market where value is adjusted moment by moment with a myriad of trades; and ii) some people overpay for acquisitions, e.g. Campeau in his purchase of Federated.

Does the mere fact that transactions in a particular industry have occurred mean that buyers will be there when the next transaction comes to market? Very possibly not. It is entirely possible that takeover transactions are unique (especially if more than 70% are strategic in nature) and that similar market conditions will not materialize if the subject is put up for bid. Reebok purchased Avia (and almost purchased Stride Rite) for huge multiples. Could Reebok or any other shoe company be counted upon to buy "Joe's Fashion Shoes" under the same terms? To assume so would be folly, yet appraisers, investment bankers and management fall into this trap routinely. The recently aborted sale of Hilton Hotels is an excellent example of this fallacy. Management believed that the chain would command as much as \$120 per share based on other hotel chain transactions. The company was taken off the market when bids over \$90 per share failed to materialize.

As mentioned earlier, the takeover market has its share of investors who may pay too much. One question appraisers should ask every time is: Just because some fool is willing to overpay for a company, does that establish a valid measure of value for a subject company? Probably not.

Unless a very clear pattern of consolidation is evident and the price/earnings ratios are reasonably consistent, better proxies for value of a controlling interest will usually be an analysis of currently trading comparatives or a discounted cash flow approach.

For these reasons I believe the use of the merger market can be a more speculative approach to value than is an analysis of publicly-traded companies. To extend the speculation even further by the application of control premiums based on those takeovers would seem to compound the speculation to the point of uselessness.

Conclusion

In view of the problems just detailed, I have concluded that demonstrable control premiums are rare in public companies, and that, for the most part, statistics on control premiums provide little or no useful information when attempting to estimate the fair market value of a controlling interest in a private company. Therefore, valuation of a private company using publicly traded comparatives

should result in a majority interest value. As a practical matter, the appraiser valuing a controlling interest in a private company may include both publicly traded stocks and actual transactions in the portfolio of comparatives, without distinguishing between the two. And, of course, no control premium should be applied to obtain total value of the company.

I hypothesize that the existence of liquidity tends to eliminate control premiums in public companies if they are well managed, and management communicates effectively with investors. This hypothesis seems to be supported by the fact that the values of a public company's voting and non-voting shares do not tend to be very different. This makes sense because in broadly-held companies, one investor's vote for chairman does not mean much; however, the ability to buy and sell at will is crucial. In effect, the investor registers his or her vote by buying or selling.

If valuation of private companies based on the public market always results in a controlling interest value, then to obtain minority interest value the appraiser must take discounts for both lack of control and lack of liquidity. This is discussed in more detail in Section IV.

Section III. VALUE OF MAJORITY INTERESTS IN PRIVATE COMPANIES

It has been established that valuation of a private company using publicly traded stocks as proxies should automatically yield a majority interest value without having to resort to a control premium analysis.

After reviewing value based on the comparative approach, a discounted cash flow analysis (DCF) will usually be in order to complete the picture of potential value of the business in a sale.

Cash flows to be discounted will normally be the most likely future post-tax operating cash flows for the company as a whole. While this definition of cash flow is easily understood by valuation professionals, there has been some confusion about the discount rate. The question has been raised in various forums as to whether or not discount rates derived from an analysis of public market stocks are minority interest discount rates or majority interest discount rates.

Assuming that public stocks generally trade near their takeover values, which is the underlying theme of this paper, discount rates generated from public market data should be majority interest discount rates. This would be equally true, whether the valuation specialist is using Arbitrage Pricing Theory, the Capital Asset Pricing Model, or a built-up approach.

Properly analyzed, discount rates derived from the public market should reflect only the systematic risk of the business and its industry. Especially with Arbitrage Pricing Theory, non-systematic risks and specific risks such as would be associated with company-specific problems or lack of liquidity or control issues, should not cloud the analysis. Thus, the resulting discount rate will be "clean", allowing the appraiser to compare apples to apples when DCF is used in conjunction with a comparative multiple approach. Any subsequent discounts for lack of control or liquidity (discussed in the following section) can then be applied uniformly between the two principal approaches.

Section IV. VALUE OF MINORITY INTERESTS IN PRIVATE COMPANIES

Although there may be no theoretical difference in value between minority and majority shares in most public companies, does the same hold true in private companies? By no means. Except for strategic minority investments, it will usually take a substantial discount in price to attract buyers for a minority share in a private company.

This minority interest discount is a function of both lack of control and lack of liquidity. Whereas the liquidity of public stocks makes control inessential to the minority investor, lack of liquidity in private companies makes lack of control a serious problem. Control in a private company includes the power to create liquidity because controlling owners generally have the ability to put the company on the market and sell. Minority shareholders have no such right. They are stuck with their in-

vestment until they find another party to take them out (a daunting task) or the controlling owner allows the company to be sold.

Thus, the issues of control and liquidity are intertwined in a private company. The interaction of the two will tend to amplify or reduce the minority interest discount used in an appraisal. The level of discount will be determined by such things as:

- Shareholder rights as spelled out in the corporate formation documents, including buy-sell agreements or ESOP plans
- Patterns of historical liquidity in the stock, if any
- If there is a controlling owner, a subjective assessment of that owner's benevolence with respect to other shareholders
- If there is no controlling owner, an analysis of the minority ownership structure and how control is exercised

Because of the interactive nature of the liquidity and control discounts, the appraiser will have to deal with them together, not separately, although some allocation between the two may be desirable in the opinion report. Exactly how to allocate the discount between lack of liquidity and lack of control is a problem that will probably never be resolved since each case will be different. Clearly, however, based on the previous analysis, discounts for lack of control cannot be derived by taking the reciprocal of control premiums paid in public company takeovers.

Valuation of a minority interest will therefore always begin with a valuation of the entire business since there is no method for obtaining minority share value directly. Discounts for lack of control and lack of liquidity will usually both be required, and these discounts will be variable depending on the circumstances.

Section V. CONCLUSION

This paper has attempted to establish that attribution of a control premium when valuing a majority interest in a private company, based on a valuation multiple comparison with publicly-traded stocks, will generally be incorrect. Similarly, valuation based on a discounted cash flow approach should yield a majority interest value, so no control premium would be applicable when performing a DCF analysis.

It would seem to me that an appraiser could utilize a control premium analysis only if it could be convincingly demonstrated that the comparative stocks being utilized are undervalued, and a reasonable estimate of the magnitude of undervaluation can be established for each stock, individually. This will be theoretically impossible in an efficient market.

Although valuation of a controlling interest should be obtained directly from both a comparative approach and a DCF approach, a discount for lack of liquidity might be considered to account for the greater difficulty (in general) of selling a private company versus a public company.

Valuation of private minority interests, on the other hand, may include a discount for lack of control. However, this discount will probably be highly correlated with the discount for lack of liquidity. Only after a thorough analysis of case specifics will the total minority discount be determinable.

Eric W. Nath is Vice President and Manager of Business Valuation, Bank of America. The views expressed below are solely those of the author, and do not necessarily reflect views, policies or positions of Bank of America, NT & SA.

See Table 1 next page . . .

Table 1. Public Takeovers – Control Premium Study

1989 TAKEOVERS							
	1989 Year End Total Market Values (\$ billions)	Total Number of Companies	Takeover Value (\$ billions)	# of Deals as a Percent of Total Public Market Deals	Dollar Percent of Total Public Market Deals	Percent of Total Exchange Value	Average Purchase Price (\$ millions)
NYSE	\$3,030.0	61	\$98.5	34.1%	80.0%	3.3%	\$1,614.8
AMEX	130.8	29	6.4	16.2%	5.2%	4.9%	220.7
NASDAQ	<u>386.3</u>	<u>89</u>	<u>18.3</u>	<u>49.6%</u>	<u>14.9%</u>	<u>4.7%</u>	<u>205.6</u>
Total	\$3,547.1	179	\$123.2	100.0%	100.0%	3.5%	\$688.3

1988 TAKEOVERS							
	1988 Year End Total Market Values (\$ billions)	Total Number of Companies	Takeover Value (\$ billions)	# of Deals as a Percent of Total Public Market Deals	Dollar Percent of Total Public Market Deals	Percent of Total Exchange Value	Average Purchase Price (\$ millions)
NYSE	\$2,460.0	89	\$79.7	27.8%	69.4%	3.2%	\$897.8
AMEX	112.2	47	7.8	14.7%	6.8%	7.0%	166.0
NASDAQ	<u>338.7</u>	<u>184</u>	<u>27.4</u>	<u>57.5%</u>	<u>23.8%</u>	<u>8.1%</u>	<u>148.9</u>
Total	\$2,910.9	320	\$115.1	100.0%	100.0%	4.0%	\$359.7

1987 TAKEOVERS							
	1987 Year End Total Market Values (\$ billions)	Total Number of Companies	Takeover Value (\$ billions)	# of Deals as a Percent of Total Public Market Deals	Dollar Percent of Total Public Market Deals	Percent of Total Exchange Value	Average Purchase Price (\$ millions)
NYSE	\$2,200.0	71	\$63.0	25.1%	76.1%	2.9%	\$887.3
AMEX	99.2	31	2.2	11.0%	2.7%	2.2%	71.0
NASDAQ	<u>325.5</u>	<u>181</u>	<u>17.6</u>	<u>64.0%</u>	<u>21.3%</u>	<u>5.4%</u>	<u>97.2</u>
Total	\$2,624.7	283	\$82.8	100.0%	100.0%	3.2%	\$292.6

Source: Mergers & Acquisitions Magazine, July/August 1989, "Demand for Public Companies", ADP Merger Data Base.