The Journal of Entrepreneurial Finance

Volume 2
Issue 3 *Summer 1993*

Article 1

December 1993

Valuation of Closely-Held Firms: Another Look

William P. Dukes
Texas Tech University

Oswald D. Bowlin
Texas Tech University

Valuation of Closely-Held Firms: Another Look

William P. Dukes and Oswald D. Bowlin

For the most part, closely-held firms must be valued using proxies for market data which are not available. Valuation approaches described in the literature are used by practitioners with exceptions demanded by circumstances. Results of the survey confirm statements of others that substantial discounts for nonmarketability and minority interest are usually appropriate.

I. INTRODUCTION

Much has been written in the last couple of decades about how closely-held firms should be valued. With something over 18 million businesses in operation and something less than one percent of them traded in any formal way, the need to refine valuation techniques is substantial. Many writers in the field cite Revenue Ruling 59-60 [26] and the eight factors[1] which should be considered in the valuation process, all of which are worthy of consideration. See for example, [4, 23, 28], among others. Many of the techniques used in practice are not included in the list.

Much less effort has been expended on determining the approaches used by practitioners in the valuation process. Block [4] reported on a survey of small companies that had stock repurchase plans. When no formal outside appraisal was made the most important variable was book value. When outside appraisals were made, no one used book value and the most important variables were capitalized earnings, present value of earnings and percentage of gross billings (in a minority of cases).

In an entirely different type of survey of practicing analysts, Waldron and Hubbard [29] report on techniques used by 18 valuation experts, three of whom declined to assign a value to the situation under consideration. The valuation experts were categorized as investors (entrepreneur, venture capitalist, and investment banker) or as consultants (valuation consultant, business appraiser and CPA/consultant). All seven members of the investor group who assigned a value to the project used an earnings multiple

William P. Dukes and **Oswald D. Bowlin** • Department of Finance, Texas Tech University, Lubbock, TX 79409.

The Journal of Small Business Finance, 2(3): 189-202
ISSN: 1057-2287

approach. Eight of the consultant group assigned a value and were evenly split between use of an earnings multiple and discounted cash flow. The variability in the multipliers, discount rates and cash flows was considerable. The mean value assigned by the consultant group was approximately 49% higher than the mean value assigned by the investor group, and almost 20% below the actual sale price.

A third survey reported by [10] included members of the Financial Management Association (FMA) and practicing accountants, all of whom were interested in business valuations. This survey found that modern valuation techniques are applied by the academics, accountants and practitioners who responded to the questionnaire. The wide variety of approaches used in valuation indicates that substantial differences could occur if all respondents were asked to value the same firm. It should be recognized, however, that different approaches can be used to arrive at similar conclusions. The editor of *Business Valuation Review* stated that the results of the survey may be invalid because those surveyed did not include valuation practitioners certified by the American Society of Appraisers.

The purpose of this paper is to report the results of a survey of the membership of the American Society of Appraisers (ASA).[2] The remainder of the paper is organized as follows: Part II contains a description of the ASA survey which is followed in Part III by survey results. Part IV is an assessment of the results, and Part V includes concluding remarks.

II. ASA SURVEY

A total of 379 questionnaires were sent to ASA members whose names and addresses were obtained from the ASA Directory of Certified Business Appraisers, of which three were returned. From the remaining 376 questionnaires, 120 usable responses were received for a response rate of approximately 31.9 percent. Part III contains a skeleton form of the questionnaire with data presented in Tables 1 through 12 showing the proportions of responses to various questions asked of ASA members. The next section provides survey results.

III. SURVEY RESULTS

Little significance is attached to the type of firm valued other than the indication that a large proportion of the respondents value each of the different types of firms listed. Table 1 shows that 97.5% of the respondents (117 out of 120) value service and wholesale/retail type firms. Relatively speaking, there are fewer public utility type firms and even fewer which are

Table 1
Type of Firm Valued

Rank Choices by ASA Activity	*ASA*
Service	97.50%
Wholesale/Retail	97.50
Manufacturing	96.67
Construction	90.00
Petroleum	55.00
Mining	43.33
Public Utility	40.83

Table 2
Size of Firm Valued

Rank Choices by ASA Activity	*ASA*
$1 mil to 10 mil	99.17%
$10 mil to 100 mil	94.17
$.5 mil to 1 mil	91.67
over $100 mil	76.67
$.1 mil to .5 mil	72.50
less than $.1 mil	40.00

closely-held; therefore fewer valuations are required and fewer valuations made. Further, public utility firms are somewhat unique and require different treatment in accounting and consequently in valuations, therefore fewer business appraisers would be needed and fewer appraisers would elect to work in that field. These thoughts would tend to justify the fact that only 40.83% (49 out of 120) of the appraisers work with public utility firms. Since the sum of all of the responses is substantially larger than 100%, many analysts value one or more types of firms.

The size of the firm categories ranges from less than $100,000 (very small) to over $100 million as shown in Table 2. The most common size of the firms valued is in the $1 million to $10 million range with 99.17% (119 out of 120) of the respondents so indicating. The lowest valuation activity at 40% (48 out of 120) is in the very small size category.

The apparent need for firm valuations is shown by the proportion of the ASA respondents working in "litigation other than bankruptcy" and "estate and gift tax" areas of 98.33% (118 out of 120 respondents) and most of the other categories as shown in Table 3. While an annual valuation is required for ESOPs the demand for that service appears to be substantially less than for bankruptcies, 29.17% versus 66.67% respectively. Based on the

Table 3
Purpose of Valuation

Rank Choices by ASA Activity	*ASA*
Litigation other than bankruptcy	98.33%
Estate and Gift Tax	98.33
Sale of Other's Firm	90.83
Merger	90.00
Estate Settlement	85.00
Bankruptcy	66.67
ESOP	29.17
Investment by firm	15.83
Sale of own firm	10.00

Table 4
Number of Firms Valued Each Year

Rank Choices by ASA Activity	*ASA*
More than 20	64.17%
11 to 20	25.83
6 to 10	6.66
1 to 5	3.33

responses, it would appear that there is a greater need for valuation in bankruptcies than in active, formal ESOPs.

The breadth of activity is shown by the number of firms valued each year by each respondent (Table 4), as well as by the wide range of purposes shown in Table 3. Those few respondents valuing 10 or fewer firms each year could very well have other business assignments that consume a significant part of their time.

Evaluators prefer to have as much of the best data available as possible with which to work. It is unlikely that tax returns and industry research would be preferable to audited and unaudited financial statements; therefore significance of the difference in type of data available is probably related to factors other than choice of the respondents. As an example audited statements are more likely to be available from the larger firms of which there are fewer in number. Choices for data sources are shown in Table 5.

The initial valuation preference is "firm as a whole" by a substantial majority as shown in Table 6. However, since the sum of the responses exceed 100% many respondents appear to be saying that the ownership equity and the firm as a whole are valued at the same time initially. The nature of the assignment could determine what is valued and in what sequence. For

Table 5
Sources of Data Use in Valuation

Rank Choices by ASA Activity	*ASA*
Unaudited Statements	90.83%
Audited Statements	89.17
Info Supplied Directly	75.00
Company Records	71.67
Tax Returns	67.50
Industry Research	26.67

Table 6
Which Do You Value First?

Rank Choices by ASA Activity	*ASA*
Firm as a Whole	73.33%
Owners Equity	39.17
Specific Shares	8.33

example, if the request is for the value of a minority equity interest, most would value owners equity first.

The most popular stock valuation model among academics is Gordon's [12] constant growth model which carries with it a time period for future estimates of dividends of "all years to infinity". Practitioners have a strong disagreement with this approach for future estimates when valuing closely-held firms, as did respondents to Bing's survey [3]. The responses in Table 7 could very well reflect the fact that most small closely-held firms do not pay dividends, therefore the choices are for estimates of earnings or cash flow. By far the most common choice is three to five years. It might be noted in passing that Graham, Dodd, and Cottle [13] preferred to make projections of seven years of earnings for growth stocks. They then applied a multiplier to the fourth-year earnings. (pp. 536-8). (It may be that the three to five year approach is used to estimate an average amount of earnings to capitalize, in essence valuing a business as though it provides a stream of earnings extending to infinity.)

The use of a risk-free rate of interest plus a risk premium is the first choice for the discount/capitalization rate by a wide margin (97 out of 120 = 80.83%). Theory and practice tend to converge on this choice. Since the percentages for all responses total considerably more than 100%, it is obvious that many respondents suggest using more than a single approach in determining the discount/capitalization rate. It should be noted that practitioners recognize and use the approaches suggested by theory as shown in Table 8.

Table 8 contains a response of "CAPM approach" which was written in by 11.67% of the respondents. The CAPM concept is entirely consistent

Table 7
Years in Future Estimates For Cash Flow, EPS or Dividends

Rank Choices by ASA Activity	*ASA*
3 to 5 years	59.17%
6 to 10 years	29.17
1 year	16.67
All years to infinity	9.17
2 years	3.33
11 to 20	2.50

Table 8
What do you use for the Discount/ Capitalization Rate?

Rank Choices by ASA Activity	*ASA*
R_f + Risk Premium	80.83%
E/P ratio of similar firms	50.83
Corporate bond yield + Risk Premium	12.50
CAPM Approach	11.67
Yield + Growth Similar Firms	7.50

with the "R_f + risk premium" marked most by respondents. However, the risk premium can be estimated or proxied by means other than the CAPM.

ASA members selected the yield on Treasury bonds as first choice for the proxy of the risk-free rate by a margin greater than 3:1. The T-bond choice conforms to the suggestion of [8] rather than the T-Bill requirement shown in the more theoretical literature. The percentages shown in Table 9 are of those respondents selecting "R_f + risk premium" in Table 8. In Table 8 97 selected R_f + risk premium and of those 97, 71 (73.2%) of those respondents selected the yield on Treasury bonds, as the best indicator of the risk-free rate.

A total of 97 out of 120 ASA members selected a risk-free rate plus a risk premium as their choice for the discount/capitalization rate. Of the 97, 65 (65/97 = 67%) determine the risk premium by some proxy for beta value times the estimate of the market risk premium. Of the 65 respondents who use some proxy for beta 43 (43/65 = 66.2%) do so by using data from comparable firms. Therefore, the use of comparable firm data is the approach used most to proxy the beta value which is not observable directly. The most common approach to determining the risk premium is by use of Ibbotson's [15] data.[3] Relatively few respondents selected "corporate bond yield plus a risk premium," as reported in Table 8, as a preferred method of determining a discount/capitalization rate.

Table 9
What do you use as the Risk-Free Rate proxy?

Rank Choices by ASA Activity	*ASA*
Yield on Treasury Bonds	73.2%
Yield on Treasury Bills	23.7

Table 10
Most Practical Method For Valuation of A Small Business

Rank Choices by ASA Activity	*ASA*
Present value of cash flow after salary, before interest and taxes	36.67%
Multiple of income after salary before interest and taxes	29.17
Present values of cash flow after salary, interest and taxes	27.50
Multiple of income after salary, interest and taxes	24.17
Present value of income after salary before interest and taxes	16.67
Present value of income after salary, interest and taxes	15.00
Book value	12.50
Multiple of sales	10.00
Comparable firms	5.00
Present value of dividend/draw	2.50

Responses to the request to select the most practical approach to valuing a small business varied over the full range of possibilities. The choice for book value was indicated by a far larger number than is suggested in finance literature. (For a discussion of the use of book value see [5] and [30]). The choices and percentage of responses for each are shown in Table 10.

Determining the present value of cash flows after salary but before interest and taxes is considered to be the most practical valuation approach by 36.67% of the respondents. The use of cash flows before interest and taxes should be used when the value of the firm as a whole is calculated. On the other hand, cash flows after interest and taxes should be used in calculating the value of the firm's equity. In estimating value in this way it could be argued that the capitalization rate should be used to value a single-period earnings figure, while a discount rate should be used to value a stream of future cash flows. In practice, however, a capitalization rate and a discount rate are treated as though they were the same as in valuing a perpetuity. This treatment is indicated by Schilt [27], Mercer[4] [19], Pratt [25] and others as they indicate that a discount/capitalization rate can be converted into a multiplier by taking the reciprocal of the discount rate. Therefore, the "multiple of income after salary before interest and taxes" could be considered to be the equivalent of "present value of income after salary before interest and taxes."

The "comparable firms" approach,[5] which was written in under the category of other, requires the identification of one or more firms in the same

Table 11
What is the Direction of Change?

Rank Choices by ASA Activity	*ASA*
Can't tell	40.83%
Up & Down about the same	26.67
Usually down	17.50
Usually up	2.50
Always up	.83
Always down	-0-

Table 12
What is the Discount for Minority Interest?

Rank Choices by ASA Activity	*ASA*
26-50%	72.50%
11-25	25.83
51-75	11.67
1-10	10.00
0	9.17
76-99	6.67

industry which are doing business in the same way and whose stock is actively traded; these firms are considered to provide good proxy data for the valuation of closely-held firms. The discount rate, capitalization rate, price-earnings multiple , beta and other relationships needed for valuation are assumed to be the same as the average of the "comparable" firms. The need arises because market data are not available for closely-held firms.

It should be noted that the sum of the responses in both groups far exceed 100% which means that many analysts prefer to use more than one approach in the valuation, as has been suggested by several authors, such as [8, 25, 27, 31].

The majority of the respondents indicate that they may change the valuation arrived at by quantitative means because of qualitative factors, but the most frequent response was that they "can't tell" the direction of the change. The responses are shown in Table 11.

ASA members selected 26-50% as the most likely discount for a minority interest. Several ASA respondents correctly indicated that the minority discount is only part of the issue. The other part addressed strongly by Moroney [22] and others, is that closely-held firms are not marketable for the most part and deserve a discount for nonmarketability, as indicated earlier. Had the question included a discount for nonmarketability as well as for a minority interest, the more frequent response may well have been "over 50%" for a large number of respondents. Responses are shown in Table 12.

IV. ASSESSMENT OF THE RESULTS

The survey and responses from members of the American Society of Appraisers provides adequate data on which to draw several important conclusions pertaining to various techniques which are used in the valuation of closely-held firms. The principal conclusions are presented below.

Many of the approaches recommended in the finance literature are used by practitioners in making business valuations. There are differences, however, which are often demanded by circumstances. In determining a discount rate to use in making time adjustments of future cash flows or earnings, a significant part of theoretical literature supports use of both a) a risk-free rate plus a risk premium to obtain a discount rate and b) the dividend yield plus an average growth rate of similar firms for which market data are available. The survey shows much support for the former and little if any support for the latter. This choice is reasonable and logical because most small businesses do not pay dividends, therefore the technique would not be appropriate. Ibbotson's data are used widely in estimating risk premia. We conclude that several, but not all, approaches discussed in the literature are used in practice. Of course, the approach must be appropriate for closely-held firm valuation, which means that reasonable proxies must be available when market data are not available.

There should be no doubt that the lack of market data does affect the valuation process. Textbook examples usually assume availability of market data which in practice must be proxied in order to use many of the valuation techniques. Proxies provide approximations which may be the best available, but tests of the closeness of the approximations are usually not possible.

The lack of an active market for closely-held firms affects the valuation process. *Mergerstat Review* [20], Moroney [22] and others have indicated that discounts are appropriate for size, nonmarketability, and minority interests. There is general agreement among authors and individuals making valuations that discounts are appropriate, the size of which must depend on the risks involved and the circumstances in each case.

The wide range of responses to many questions indicate that judgement of the analyst is quite important. In addition, however, many respondents stated explicitly that judgement is required in several aspects of the valuation process.

Differences in valuation approaches, proxies used, judgement of the analyst and risk evaluation could result in significant differences in final estimates. This has been found to be true in court cases (see [22]) and, while not part of this survey, was found to be true in an experiment conducted by [29].

V. CONCLUSIONS AND RECOMMENDATIONS

Evidence is available that indicates quite clearly that the analyst must use care and judgement in the application of techniques discussed in the literature. Some approaches apply to large actively traded firms, whereas others apply to closely-held firms when the analyst must proxy unavailable market data in the most reasonable and realistic way possible. Moreover, since the literature contains several different methods of determining the value of a business, and no single approach appears to be clearly superior to all others in every instance, our conclusion is that more than one approach should be considered in the valuation process when sufficient data are available to use a multiple of approaches. However, the analyst must attempt to reconcile any differences in results in these cases, and there appears to be no way to generalize about how this should be done. Clearly, the application of valuation techniques remains an art rather than a science.

As noted earlier, while the literature on the valuation process is continuing to grow, little has been published to describe actual valuations[6]. Analysts and potential analysts could benefit from additional publications of valuations of closely-held firms and other types of assets which are not actively traded.

Absent from the recent survey was any indication of the usefulness of accounting betas as proxies for the fairly widely used market betas when closely-held firms are evaluated. However, the literature contains discussions of the relationships between market and accounting betas. [1, 2, 11, 14] Perhaps more research and a further description of the relationships between the two methods of calculating beta values would provide the confidence needed for analysts to apply accounting betas in valuations. A comparison of the results from using betas and other techniques which require the use of proxies would be a major contribution. Mercer's [19] model and other uses of the capital asset pricing model could benefit from further research on this issue.

In view of the increasing number of closely-held businesses, many of which will require valuation for any number of reasons, there is a continuing need for the development and reporting of valuation applications which will give greater confidence in the process. The uses and reliability of proxy data appear to be one of the problem areas needing additional time, effort, and reporting.

NOTES

1. Factors to Consider:
   (a) The nature of the business and the history of the enterprise from its inception.
   (b) The economic outlook in general and the condition and outlook of the specific industry in particular.

(c) The book value of the stock and the financial condition of the business.
(d) The earning capacity of the company.
(e) The dividend-paying capacity.
(f) Whether or not the enterprise has goodwill or other intangible value.
(g) Sales of the stock and the size of the block of stock to be valued.
(h) The market price of stocks of corporations engaged in the same or a similar line of business having their stocks actively traded in a free and open market, either on an exchange or over-the-counter.

2. The American Society of Appraisers (ASA) was selected for survey because of a challenge by the editor of *Business Valuation Review* but also because of its reputation. ASA is our country's oldest (originated in 1936) major nationwide, multi-disciplinary appraisal teaching/testing/designation Society. It is represented by more than 6500 members in 82 chapters throughout the United States and twenty-two other countries and principalities.

The professional designations require intensive written and oral examinations and include the grading of appraisal reports. The designation requires activity in the appraisal profession, a college degree or equivalent knowledge and experience certified by the International Board of Examiners of the ASA. The Accredited Member (AM) designation requires, in addition two years of full-time appraisal experience. The Accredited Senior Appraiser (ASA) designation requires five years of full-time appraisal experience. The designation of Fellow (FASA) may be awarded in recognition of outstanding services to the profession.

For beginners ASA offers a four-level Principles of Valuation sequence in four of its disciplines, to include Business Valuation. On acceptance as a candidate, one must take the ASA Ethics Examination within one year, and, when qualified, apply for advancement to Accredited Member Status.

The four-course sequence for business valuation is as follows:

Level I: Introduction to Business Valuation
27 hours + 3 hour exam. Cost $550 for non-members.
Level II: Business Valuation Methodology
27 hours + 3 hour exam. Cost $550 for non-members.
Level III: Business Valuation Case Study
27 hours + 3 hour exam. Cost $700 for non-members.
Level IV: Business Valuation: Selected Advanced Topics
27 hours + 8 hour exam (covers all four courses). Cost $700 for non-members.

The Society offers advanced seminars which provide the opportunity for members to stay current with developments and to meet the mandatory re-certification requirements. Individual chapters sponsor seminars devoted to topics of current interest to members.

Additional information may be obtained by writing to: American Society of Appraisers, P.O. Box 17265, Washington, D.C. 20041.

3. Much of what we do in the finance area is based on a risk-reward tradeoff. If one is willing and able to accept some additional risk, the result expected is some additional return. Before one can make a policy decision some norm or expectation must be present. Ibbotson and Sinquefield (initially in 1976) provided a data base that indicates historical returns that came from accepting certain risks. The return and risk provided initially covered the time period 1926 through 1974, and now are generally updated annually. The data provided cover stocks, bonds, bills and inflation as indicated by the title of the publications. The various indexes reflect achievable returns and the associated risk.

The various series provide information that permits one to calculate historical risk-adjusted and inflation-adjusted returns. Through the various series a valuator can estimate reasonable market returns and risk-free (default free) rates and the relationship between the various series. Useful data would include estimations of 1) an equity risk premium; 2) a default premium; 3) a liquidity premium; 4) a risk-adjusted return; and 5) an inflation-adjusted return. The Ibbotson Associates (current) data have been referred to as the most practical and useful empirical research published in many years. The derived series provide benchmarks useful in valuing closely-held businesses.

4. Empirical work by Douglas [9], Klemkowsky and Martin [16], Levy [17], and Miller and Scholes [21] provide support for Mercer's [19] addition of specific company risk [SCR] factors in determining the capitalization rate. Mercer's model is as follows:

$$CR = RFR + B(MR - RFR) + SCR - G$$

where: CR = Capitalization rate
RFR = An estimate of the risk-free rate.
B = An approximate beta factor, if available (otherwise 1.0).
MR = Small stock long-run rate of return, per Ibbotson.
SCR = Specific company risk factors.
G = Subject company's long-run growth prospects.

5. Pratt [25] suggests that direct comparisons require more than the same industry code for the information to be useful. Pratt states that for comparability, criteria would include: (1) asset mix, (2) age of assets, (3) accounting policies, (4) comparative capital structures, (5) return on equity, in addition to, (6) size. Confirmation of comparability requirements is provided by Plutchock [24] when he suggests: (1) the same line of business, (2) same size range, (3) similar capital structure, and (4) vital financial ratios, especially those concerning earnings, and of course stock which is freely and fairly traded, preferably listed.
6. A partial exception is the testimony of Eugene F. Brigham, Willard T. Carleton, and Stewart C. Myers before the Federal Communications Commission in the early 1970's concerning a fair rate of return for the Communications Satellite Corporation. See J.K. Butters, W.E. Fruhan, Jr., D.W. Mullins, Jr. and T.R. Piper. [6, 7]

REFERENCES

[1] Beaver, William H., Paul Kettler and Myron Scholes. 1970. The Association between Market Determined and Accounting Determined Risk Measures. *The Accounting Review* (October): 654-682.

[2] Beaver, William H., and James Manegold. 1975. The Association between Market Determined Measures of Systematic Risk: Some Further Evidence. *Journal of Financial and Quantitative Analysis* (June): 231-284.

[3] Bing, Ralph. 1971. Survey of Practitioners Stock Valuation Methods. *Financial Analysts Journal* (May/June): 55-60.

[4] Block, Stanley B. 1985. Buy-Sell Agreements for Privately Held Corporations. *Journal of Accountancy* (September): 110-124.

[5] Bonbright, James C. 1937. *The Valuation of Property*. New York: McGraw-Hill.

[6] Butters, J. Keith, Willaim E. Fruhan Jr., David W. Mullins Jr., and Thomas R. Piper. 1987. *Case Problems in Finance*. 9th ed. Homewood, IL: Irwin.

[7] Butters, J. Keith, William E. Fruhan, Jr., David W. Mullins Jr., and Thomas R. Piper. 1987. *Instructors Manual to Accompany Case Problems in Finance.* 9th ed. Homewood, IL: Irwin.

[8] Brigham, Eugene F., and Louis C. Gapenski. 1990. *Intermediate Financial Management.* 3rd. ed. Chicago, IL: The Dryden Press.

[9] Douglas, George W. 1969. Risk in The Equity Markets: An Empirical Appraisal of Market Efficiency. *Yale Economic Essays* IX (Spring): 3-45; (1968) Ann Arbor, MI: University Microfilms, Inc.

[10] Dukes, William P., and Oswald D. Bowlin. 1990. Valuation of Closely-Held Firms. *Business Valuation Review* 9(4): 127-137.

[11] Gonedes, Nicholas J. 1973. Evidence on the Information Contents of Accounting Numbers: Accounting Based and Market Based Estimates of Systematic Risk. *Journal of Financial and Quantitative Analysis* (June): 407-443.

[12] Gordon, Myron J. 1962. *The Investment, Financing, and Valuation of the Corporation.* Homewood, IL: Richard D. Irwin.

[13] Graham, Benjamin, David L. Dodd and Sidney Cottle. 1962. *Security Analysis: Principles and Technique.* 4th ed. New York: McGraw-Hill.

[14] Hill, Ned C., and Barnell K. Stone. 1980. Accounting Betas, Systematic Operating Risk and Financial Leverage: A Risk Composition Approach To The Determinants of Systematic Risk. *Journal of Financial and Quantitative Analysis* XV(3): 595-637.

[15] Ibbotson, Roger G., and Associates. 1991. *Stocks, Bonds, Bills and Inflation 1991 Yearbook.* Chicago, IL: Author.

[16] Klemkowsky, Robert, and John D. Martin. 1975. The Effect of Market Risk on Portfolio Diversification. *The Journal of Finance* XXX(1): 147-154.

[17] Levy, Haim. 1980. The CAPM and Beta in an Imperfect Market. *The Journal of Portfolio Management* (Winter): 5-11.

[18] McCarthy, George, D., and Robert E. Healy. 1971. *Valuing a Company: Practices and Procedures.* New York: John Wiley and Sons.

[19] Mercer, Z. Christopher. 1989. The Adjusted Capital Asset Pricing Model for Developing Capitalization Rates: An Extension of Previous Build-Up Methodologies Based upon the Capital Asset Pricing Model. *Business Valuation Review* 8(4): 147-156.

[20] Merrill Lynch Business Brokerage & Valuation. 1989. *Mergerstat Review.* Schaumburg, IL: Author.

[21] Miller, Merton H., and Myron Scholes. 1972. Rates of Return in Relation to Risk: A Re-examination of Some Recent Findings. In *Studies in The Theory of Capital Markets,* edited by Michael C. Jensen, 47-78. New York: Praeger.

[22] Moroney, Robert E. 1973. Most Courts Overvalue Closely-Held Stocks. *Taxes-The Tax Magazine* (March): 144-156.

[23] Olson, Irving. 1969. Valuation of a Closely Held Corporation. *Journal of Accounting,* (August): 35-47.

[24] Plutchock, Jonathan. 1985. Valuation: IRS-Style. *Financial Planning* (February): 199-201.

[25] Pratt, Shannon. 1986. *Valuing Small Businesses and Professional Practices.* Homewood, IL: Dow Jones-Irwin.

[26] Revenue Ruling 59-60 quoted as Appendix B in [26] and as Appendix D in [18].

[27] Schilt, James H. 1982. Selection of Capitalization Rates for Valuing a Closely-Held Business. *Business Valuation News* 1(2):2-4.

[28] Vass, David T. 1973. Factors that are Presently Being Emphasized in Valuing a Closely-Held Corporation. *The Journal of Taxation* (June): 356-358.

[29] Waldron, Darryl, and Carl M. Hubbard. 1991. Valuation Methods and Estimates in Relationship to Investing Versus Consulting. *Entrepreneurship Theory and Practice* (Fall): 43-52.

[30] Walker, Ernest W., and J. William Petty II. 1986. *Financial Management of the Small Firm.* 2nd ed. Englewood Cliffs, NJ: Prentice-Hall.

[31] Weston, J. Fred, and Thomas E. Copeland. 1986. *Managerial Finance.* 8th ed. Chicago, IL: Dryden Press.