

A SURVEY OF THE VALUATION PRACTICES OF PROFESSIONAL ACCOUNTING FIRMS

**Simon M Keane MA LLB PhD CA
Professor of Accountancy
University of Glasgow**

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Foreword

This series of monographs is published by the Research Committee of The Institute of Chartered Accountants of Scotland which is responsible for identifying topics. The series is addressed to all groups with an interest in accounting and financial management, and individual monographs are written in such a way as to be understandable to readers who are not already familiar with the existing extensive literature on the subject.

This particular monograph reports the results of a survey of the valuation methods of accounting firms in Scotland. Although the practices tended to be uniform, they were characterised by a general lack of regard for some of the key principles of modern valuation theory, and by a general assumption that the valuation method adopted is of secondary significance in what was perceived to be essentially a process of negotiation. The monograph will be of interest to accountants, businessmen, lawyers, company directors and shareholders. Those involved in education and students will also find it helpful.

The Committee commends this monograph for study in the interest of better understanding: the opinions expressed by the author are, of course, his own.

**The Institute of Chartered
Accountants of Scotland**

**Professor J P Percy
Convener, Research Committee**

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Chapter 1

Investment Valuation Theory

IN THE ICAS TOPIC series No 1 “The Valuation of Shares and Businesses” (1990) it was noted that:

“The two tools of modern valuation theory are the present value model and the capital asset pricing model. No valuation method can have theoretical validity unless it directly or indirectly takes account of these two concepts. The first states that business income flows cannot be correctly evaluated without having regard for the risk-adjusted time value of money, and the second provides the most plausible insight into the market price of risk. Any valuation method is suspect, therefore, which departs significantly from the principles of the present value model and from capital asset pricing theory.”

This paper reports the results of a survey carried out to investigate the extent to which professional accounting firms incorporate the principles of modern investment valuation theory in the valuation of businesses and the shares of unlisted companies. The objective of the survey was not to perform a rigorous statistical analysis of valuation practice but to gain some insight into the degree to which accountants in Scotland involved in nonfiscal valuations have regard for the key concepts of valuation theory.

In the accounting and finance field of study any disparity between traditional practice and theory is likely to be more marked in the business valuation context than in any other topic area. It is no exaggeration to state

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that virtually every theoretical development that has taken place in finance theory in recent decades relates in some degree to the problem of valuing risky assets. Apart from the basic present value concept, these developments include portfolio and capital asset pricing theory, efficient markets theory, option theory and the capital structure and dividend policy literature.

The valuation of risky assets is a highly complex task where, it will be argued, the skills of the accountant in interpreting financial data need to be infused with a deep understanding of modern investment theory. Those aspects of traditional valuation practices which predate this theory tend to be largely a blend of intuition and rules of thumb. In principle, the task of valuation requires a consideration of every major aspect of the business, including its risk complexion, its research and development policy, marketing strategy, labour relations, diversification policy, production methods, treasury management style, taxation exposure, capital structure and dividend policy. These factors, however, can be categorised as relating to one of two principal problems in valuation – predicting future income flows and controlling for risk.

The Principles of Valuation

The valuation of any business asset depends on its future income potential. Because the future is uncertain, investment theory teaches that the market value of a risky asset is the current certainty-equivalent of its future uncertain benefits. Therefore, the two key elements of the valuation process are predicting future income flows and converting these risky flows into their present values. The classic present value model reflects these two elements explicitly, the first in the numerator and the second in the denominator:

$$\text{Present value} = \frac{\text{Income}}{(1+k)} + \frac{\text{Income}}{(1+k)^2} + \dots + \frac{\text{Income}}{(1+k)^n}$$

where k is the market required return for an asset of the particular risk class. The effect of discounting at k is to convert the future risky flows to their present value certainty equivalents such that the resulting present value can then be compared directly to other present values without regard for differences in risk, given that the risk has been fully allowed for in the discounting process.

More specifically, investment theory teaches that the relevant income flow is cash:

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$$PV = \frac{C_1}{(1+k)} + \frac{C_2}{(1+k)^2} + \dots + \frac{C_n}{(1+k)^n}$$

For convenience the two principal problems of valuation will be referred to hereafter as “growth prediction” and “risk assessment”. The former involves forecasting the future cash-generating power of the business, taking account of such factors as the quality of its management, its marketing strategies, research and development policies, and the competitive structure of the industry. The latter involves assessing the risk characteristics of the business, which in the context of the capital asset pricing model involves estimating the beta coefficient of its expected returns and deriving a capitalisation rate which conforms to the logic of this model.

The Capitalisation Rate

If there is any single issue which dominates valuation theory it is the problem of determining the risk premium component of the capitalisation rate for risky investments. The major source of insight into this problem is provided by what is popularly described as Modern Portfolio Theory (MPT), a term which is used at times to embrace efficient market theory, portfolio theory and the Capital Asset Pricing Model (CAPM). Efficient market research indicates that the stock market can generally be trusted to value listed securities more efficiently than most individual expert participants in the market. Portfolio theory advises us not to value assets or businesses in isolation but within a portfolio context. Whether or not the owners of a business actually possess a portfolio of assets, market values are determined by the fact that it is possible for investors to diversify away a large component of an asset's risk. The evidence indicates that investors are compensated only for the component of total risk that they cannot diversify away (systematic risk), rather than for the risk they can diversify away (unsystematic risk) whether they happen to have done so or not. From this logic the capital asset pricing model teaches us that, given certain assumptions about the market and about investor behaviour, the capitalisation rate k for any risky asset or business is given by the equation:

$$\begin{aligned} k &= \text{risk free rate} + \text{market risk premium} \times \text{asset's beta} \\ \text{ie, } k &= R_f + (R_M - R_f)\beta \\ \text{where } R_f &= \text{risk-free rate of interest} \\ R_M &= \text{the expected return on the market portfolio.} \end{aligned}$$

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and beta is a measure of the asset's systematic risk, the sensitivity of the asset's returns to the market's returns.

Although it is now recognised that there are some serious problems with CAPM, in that empirical tests are ambiguous about its explanatory power and indicate the need for some refinement in the model, it is also generally accepted by market theorists that the model provides the most useful explanation available as to how the market prices risk. Certainly, few dispute its fundamental insight that, in valuing assets or businesses, these must be seen in a portfolio context, and that risk which can readily be diversified away is unlikely to affect market values. If this principle is accepted, the implication is that intuitive approaches to risk measurement and the calculation of capitalisation rates will almost certainly be misleading. For example, the model teaches us that an investment or business may appear very "risky" to a businessman but, if it has a beta equal to zero, its capitalisation rate should be roughly equal to the risk-free rate. Clearly this is counterintuitive. But the logic is persuasive. The returns of a business with a zero beta are independent of general market conditions, and therefore when the shares in such a business are included in a diversified portfolio they add no risk to the portfolio. The unique risk of the business is diversified away in the portfolio.

Methods of Valuation

There are several variants of the basic valuation method and these can be divided into two broad approaches, one direct, the other indirect. Direct approaches involve explicitly addressing the two fundamental ingredients of value – growth prediction and risk-assessment. The indirect approach does not consider these factors explicitly but draws its value judgments directly from the market (or from comparable assets whose values are known). This latter technique is attractive because, in principle, it allows the valuer to proceed without having to address the complex issues involved in determining the fundamental ingredients of value. If the valuer is satisfied that a genuine similarity exists between the company being valued and a listed company, he can substantially avoid the task of estimating both the rate of future growth and the magnitude of the appropriate capitalisation rate, since both of these are captured in the P/E ratio of the comparator company's shares.

Capitalisation of Maintainable Earnings

The first variant of the basic valuation model is the maintainable earnings approach. A single figure is estimated for future earnings which captures the expected growth in earnings. This number is then capitalised at the appropriate

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risk-adjusted rate of return k . Thus

$$\text{Value} = \frac{\text{Future Maintainable Earnings}}{k}$$

For example, if earnings are expected to be maintained at £1M per annum and the capitalisation rate is 20%, then the value is £1M/0.20 = £5M. This is equivalent to valuing the earnings at a multiple of 5.

For the above method to be consistent with the basic valuation model, average “earnings” in this context must be assumed to be synonymous with average cash flows. The compromise with the basic model lies in the process of compressing future income flows into a single average rather than deriving and discounting each year’s flows individually.

Assets Approach

Under this method the tangible assets are valued at break-up value and a separate figure calculated for the business’s goodwill and other intangibles. The problem with the approach is that in theory it requires a capitalisation rate appropriate to the super-profits of the business, which conceptually is arguably different from k the capitalisation rate for the business’s total income stream. Since markets deal in total returns rather than in subsets of return it is always problematic to determine the appropriate rate for the superprofits stream.

Dividend Valuation Model

Whilst the basic cash flow model is premised on the cash flows accruing to the business entity, the dividend valuation model considers the cash stream directly flowing to the shareholders. Fundamentally this is equivalent to the basic model because the proportion of the cash flows which are not distributed to shareholders can be expected to be reflected in a proportionally higher share price. The model states:

$$P_0 = \frac{D_1}{k - g}$$

Alternatively,

$$P_0 = \frac{D_0 (1 + g)}{k - g}$$

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Where D_0 = Annual dividend of current period
 D_1 = Annual dividend at end of period 1
 g = percentage growth rate.

In its simple form the model assumes constant growth, and therefore its practical relevance is restricted. The approach must clearly be modified if a period of above-normal growth is expected, followed by steady growth at more normal levels. It also ignores complexities such as personal taxation and remittability problems. The great virtue of the model, however, is that it highlights the fundamental ingredients of value, growth and risk. The model implies, other things being equal, that the value of a share:

increases the greater the payout ratio
increases the greater the value of g
decreases the greater the value of k

This appears to suggest that payout policy affects value, but any change in the payout is likely to be matched by offsetting effects in g as a result of changes in retained earnings. Likewise, higher interest rates due to inflation will increase k but this may be offset by higher returns and greater values for D . The dividend model, therefore, is based on the premise that dividends create a relevant cash flow stream without implying that the pattern of the stream matters in terms of dividends now or higher dividends later.

The dividend valuation model is often assumed to be suitable only for minority shareholdings, but even where dividend policy is expected to be under the control of the valuer, the model remains valid in principle.

The apparent simplicity of the model, however, is largely illusory. Unlike the basic cash flow model, the numerator is relatively easy to predict, but the problems are simply transferred to the denominator, in particular to estimating g . It may appear somewhat unrealistic to start from the current dividend of a complex, diversified multinational company and proceed to perform the task of valuation in terms of predicting the future rate of growth in this number. Clearly this is a complicated process which cannot be made except by considering the present and future earning power of the various sectors of the enterprise.

Price Earnings Ratio Approach

The assets, earnings and dividend models, if correctly specified, are all valid derivatives of the basic present value cash flow model. The assets approach concentrates on the resources of the firm which generate income, the earnings

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approach on the business's aggregate earnings potential, and the dividend approach on the cash flow filtering through to the shareholders. None of the approaches, however, can be legitimately implemented without addressing the k and g variables. The P/E approach, by contrast, provides a potential escape from these problems, in that it draws on the market's estimate of k and g . A P/E ratio is selected from a similar company (or group of companies) in the listed market, and this is then reduced to reflect the lack of marketability of the unlisted company. The resulting multiple is applied to the unlisted company's earnings of the same period.

The significance of the P/E ratio can be better understood by adapting the basic dividend discount model:

$$P_0 = \frac{D_0 (1 + g)}{k - g}$$

If b = the retention ratio, then $D_0 = (1 - b)E_0$, and

$$P_0 = \frac{E_0 (1 - b)(1 + g)}{k - g}$$

Therefore

$$\frac{P}{E} = \frac{(1 - b)(1 + g)}{k - g}$$

This implies that, other things being equal, the P/E ratio will be higher

the greater the expected payout ratio, $(1 - b)$
the greater the expected growth rate, g
the lower the relevant discount rate, k

Again, it has to be stressed that these relationships are interdependent. For example, the relevance of b to the share's value may be minimal since any increase in payout is likely to be matched by an offsetting decrease in g , the growth rate. The critical factors in the ratio, k and g , are the perceived risk and real growth potential of the company. A high P/E ratio is associated with low risk or high growth, or both. The influence of risk, however, is usually likely to be secondary to the expected growth factor.

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The relevance of this approach depends to some degree on the level of confidence the valuer has in the valuational efficiency of the listed market. Given a reasonable degree of confidence, the great advantage of the method is that if an identical company can be found in the listed market, neither k nor g need to be estimated for the valuation company since both variables are impounded in the P/E ratio of the comparator company. It would be misleading, however, to assume that the approach overcomes the valuer's problems because the task is transformed into one of measuring the similarities between two companies and of determining the modifications that need to be made to the P/E factor to allow for observed differences. It is difficult to determine the degree of similarity between one company's income-generating power and risk characteristics and those of another without a profound understanding of the factors that determine income-generating capacity and market risk. But the method does have the overriding virtue that it draws directly on the market's valuational insights.

Chapter 2

Results of the Survey

INTERVIEWS WERE conducted with representatives of 16 accounting firms, each of the firms having been invited to suggest a suitable spokesperson for its valuation procedures. The firms interviewed included the “big six” and a selection of medium and small firms in the Glasgow area. Because of the complexity of some of the issues, an interview rather than a postal questionnaire approach was adopted, and this limited the size of the sample. For reasons that will be discussed later, this limitation was not considered a significant factor, particularly when it became apparent that, once the practices of the larger firms had been surveyed and found in certain key respects to be defective, there was insufficient likelihood of theoretically superior practices being found amongst smaller firms to make an extended sample of significant value.

The Appendix contains the questionnaire used to guide the interview. Although the individual respondent was invited to describe his personal valuation practice rather than the firm’s, in none of the cases was there any indication that the response would have been significantly different if made by other members of the firm. Table 1 contains a summary of the results.

The general principles of valuation

One of the major findings of the survey was the absence of any significant regard for the principles of MPT. For the great majority of respondents the beta concept of CAPM was either a wholly unfamiliar concept or it was regarded as irrelevant to ordinary business valuation problems. Appropriate

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risk adjustments were not based on explicit volatility measures but largely on intuition or “professional judgment”. Only one respondent demonstrated an awareness of the fundamental insight of CAPM, namely the relevance of distinguishing between the systematic and unsystematic components of risk. The significance of this latter response will be discussed later under the educational implications.

TABLE 1

	<i>Regularly</i>	<i>Occasionally</i>	<i>Rarely</i>	<i>Never</i>
Use the basic cash flow present value model	-	3	1	12
Consider concepts such as CAPM and Beta in estimating risk adjusted capitalisation rate	-	1	-	15
Apply historic P/E to historic earnings	-	1	1	14
Apply historic P/E to future maintainable earnings	13	3	-	-
Use assets approach				
(a) calculating goodwill explicitly as capitalisation of super-profits	-	1	-	15
(b) tangible assets only, for comparison with other valuations to derive goodwill as residual	13	2	1	-
Use dividend valuation model				
(a) classic dividend growth model	-	1	3	12
(b) dividend yield	-	13	3	-
Explicitly consider problem of real versus nominal income flows and discount rates	-	1	1	14

The valuation methods

None of the respondents claimed to use the basic present value model as their normal valuation method, and most never applied the model in a business valuation context. One of those who had used it admitted that his use was limited to situations where it was imposed upon him by the client, for example in valuations relating to property companies.

All respondents claimed to use as a principal valuation method what they generally described either as the future maintainable earnings approach or the

RESULTS OF THE SURVEY

P/E approach, although, as discussed below, this differed from each of the similarly named methods described above. Some claimed to use an assets approach as the primary method in the case of small businesses, but for the majority this approach was used mainly as a check on an earnings valuation. The "assets" method used, however, was rarely applied in the full sense that goodwill is explicitly estimated. The method consisted of a valuation of the tangible assets, the result being compared with the valuation produced by the earnings method to derive an implied goodwill. The dividend growth model was not used regularly by any of the firms, although, for minority shareholdings, dividend yield was usually considered to be a key measure.

The use of the P/E approach was frequently motivated less by a belief in the market's valational efficiency than by the belief that, however irrational the market might be, its value judgments reflected what people "were willing to pay". The interpretation of the approach in practice was one of the significant findings of the survey. In nearly every case it consisted of an estimate of future maintainable earnings multiplied by an historic P/E ratio normally derived from a similar company or group of companies listed in the stock market (occasionally from other similar valuations) and adjusted to reflect the unlisted company's lack of marketability.

At the end of the interview the logic of this latter practice was discussed with each respondent. It was pointed out that the standard P/E ratio drawn from the market reflects the market's estimate of growth in current (historic) earnings. In effect it incorporates the growth factor, g , and so by applying such a multiple to the future rather than to the recent earnings of the valuation company there is a double counting for growth. In each case the respondent agreed that this was a logical inconsistency in the method, and acknowledged that it would be more logical to apply the P/E to the company's recent earnings on the same basis that the listed company's P/E is calculated. Only one respondent had previously been conscious of this flaw, a fact which he attributed to his experience as auditor for an investment trust where periodically it was necessary to value unquoted shares. He admitted, however, that unless it presented a major problem, he would normally permit the double-counting to pass without adjustment.

The use of an historic P/E ratio as a capitalisation rate for future income is not only incorrect but it fails to recognise one of the potentially significant advantages of the P/E approach, being able to avoid having to make predictions of future income growth. In an attempt to play down this double-counting practice, several of the respondents argued that the effects of the practice are largely compensated for by other factors:

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- (1) There is a tendency to be conservative in the estimate of future earnings. Although the concept of future maintainable earnings should in principle take account of growth for the foreseeable future, in many cases the respondents rarely went beyond three years growth to construct their maintainable earnings number.
- (2) There is also a tendency to make the deduction for lack of marketability conservatively high, and for this to vary significantly. The average deduction reported was about 35%, but the amount could vary between 10% and 75%. The lack of marketability, and the closer proximity of some companies to a listing status relative to others, can explain some degree of variation in the P/E adjustment, but not a variation as wide as 10% – 75%. The effect of a high deduction, it might be argued, is to remove the growth component from the P/E ratio. The numerator of the P/E ratio would reduce to unity and the resulting P/E would become a multiple equal to the reciprocal of k , which would effectively bring it into line with the theoretically correct maintainable earnings approach.

Although not explicitly recognised by any of the respondents, the deduction was susceptible to further downward bias as a result of a tendency to include in the adjustment a factor for additional risk. If this differential risk is systematic risk then the two companies are not directly comparable, and this raises questions about the relevance of the comparator company in applying the P/E approach. If the differential risk is unsystematic or unique risk then MPT theory is clear that this does not affect the required return, since by definition it is diversifiable risk.

- (3) Virtually all the respondents stressed that the valuation process is typically characterised by a negotiation process between the interested parties, and that the valuation models used are not necessarily crucial to the outcome of the negotiations. The values that emerged from the application of the models should be viewed as no more than a basis for negotiation.

Does the choice of method depend on the client's interest?

The interviewees were asked whether the choice of valuation method depended on the reasons for the valuation, and on whether they represented the buyer or the seller. All but one stated that the choice of method did not vary much except when a minority holding was being valued, where there was a greater tendency to use the dividend yield approach, or where there was pressure from the client to use a particular method. However, although the method was not affected by which side the firm represented, sellers or buyers,

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it was generally conceded that the valuation numbers would be different because their estimates of the variables which formed the inputs to the method used would undoubtedly be influenced by what they perceived to be their clients' interests.

Inflation

Before discussing the results, a note on the treatment of inflation is appropriate. The basic rule in valuation is that real income flows should be matched with real discount rates, and nominal income flows with nominal rates. It was difficult, however, to assess to what extent this rule is recognised in practice since the problem arises mainly in the direct valuation methods, and these of course tended not to be used by the respondents. In the P/E approach, the appropriate flow is the recent annual earnings number, and the question of nominal or real flow does not arise. But, to the extent that practitioners incorrectly use future earnings in their application of the approach, they do in fact face the real or nominal flow issue. There was a tendency for many of the respondents to indicate that they would probably express the future income in "today's terms". This reply would be correct if they had correctly used historic earnings in applying the P/E ratio approach, but it was inconsistent with their use of future maintainable earnings since the discount rate k is typically estimated in nominal terms.

Chapter 3

Discussion of the Results

THE ARGUMENT that the many biases found in the application of the P/E approach might in practice cancel one another out in such a way as to produce an acceptable valuation is not convincing. The only plausible defence for what appears to be a fundamentally flawed approach is that, however defective the method used, the valuation number that results is only a starting point. Several of the interviewees argued that to the extent that the various biases in the method fail to compensate for one another, the "corrective" impact of the negotiation process can reasonably be relied upon to produce an acceptable result.

This logic is analogous to an argument that is sometimes advanced to explain how the stock market succeeds in valuing shares with as high a degree of efficiency as the evidence suggests. The theory holds that the consensus value which emerges from the sometimes idiosyncratic and ill-informed behaviour of stock market participants transcends the limitations of the individual valuers.

It would be comforting to believe that the consensus values that emerge from the negotiations of valuers of unquoted shares have a similar tendency to transcend the shortcomings of the valuation methods used. However, whilst there may be some truth in the assumption that professional intuition will lead the negotiation process to a valuation which approximates to the value derived from a theoretically correct approach, it would be dangerous to allow this assumption to excuse valuers from the need to be faithful to the fundamental principles of valuation theory. In the first place, valuation is not always a

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matter of negotiation between interested parties. An accountant at times may be required to provide an expert opinion on the value of a business without actually entering into negotiations with any of the interested parties. In this event, the validity of the method employed by the valuer is critical to the final valuation. Secondly, the analogy of the quoted market is of doubtful relevance. It is possible that the stock market derives its valuational efficiency not so much from the compensating effects of participants' flawed valuation methods as from the overriding influence of a minority of highly skilled analysts. If this were so, it would be difficult to assume any analogy between quoted and unquoted shares. An assumption that the deliberations of a few negotiators in the valuation of unquoted shares will be sufficient to neutralise the effects of any deficiencies in the valuation method employed, and so ensure the emergence of an efficient value, is difficult to defend.

The significance of the survey

The results of this study may appear somewhat limited by the size of the sample. However, the findings were so uniform throughout the sample that it is reasonable to assume that the conclusions have fairly widespread relevance. Certainly, if the survey had revealed a tendency by larger accounting firms to apply the principles of modern valuation theory in practice it would have been worthwhile widening the sample to determine the extent to which smaller firms behaved similarly. However, since none of the large or medium-sized firms surveyed appeared to value businesses within a MPT framework, and all exhibited the same flawed interpretation of the P/E approach, it was concluded that the likelihood of finding more sophisticated practices amongst small accounting firms was too remote to merit including any more than a few small firms in the sample. Even if one or two exceptions could be found by extending the survey, the fundamental conclusion of the study would not be altered, that valuation practice in Scotland is based largely on negotiation rather than on theoretical principles.

Educational implications

It became apparent from the interviews that ICAS classes generally had a much greater influence on practitioners' subsequent perceptions of "correct" valuation procedures than previous exposure to theory in undergraduate courses. It appears that, unless the theoretical foundation acquired at the pre-Institute level is subsequently "validated" in ICAS courses and confirmed as having relevance to practice, there is a tendency for practitioners not to accept the theory as relevant to practice.

DISCUSSION OF THE RESULTS

The influence of Institute classes on subsequent practice appeared also to be affected by the respondent's age in respect of the choice of valuation method. For example, although most respondents viewed an assets approach at best as a back-up for an earnings valuation approach, its use as a primary valuation method (involving concepts such as the "number of years purchase of superprofits") was advocated by a few older respondents. This is consistent with the fact that, in the '50s and '60s, Institute classes were possibly more positive about an assets approach than is recently the case.

Further research might indicate whether the practices in other countries and other institutions differ significantly from those reported here. It is noteworthy, however, that the only respondent in the sample who had actually applied the principles of capital asset pricing theory in practice had gained her experience in North America in a firm which apparently used the approach as a matter of routine. The respondent, however, had ceased to do so on returning to this country because of the constraints imposed by the conventions applying here.

Chapter 4

Conclusions

THE OBJECT OF this study has been to investigate the extent to which the principles of investment theory, in particular Modern Portfolio Theory, are reflected in the business valuation practices of accounting firms in Scotland. One of the most significant findings is the near universal preference for a P/E ratio approach to valuation with its inherent advantage of drawing on the listed market's valuational expertise. The application of the approach, however, was found to be characterised by a number of shortcomings. These included:

- (1) a general tendency to use earnings rather than cash as the relevant income flow**
- (2) a general disregard or lack of awareness of the relevance of portfolio and capital asset pricing theory to the valuation of unlisted securities**
- (3) a widespread tendency to apply historic P/E ratios to future earnings and so to double-count for growth. In addition there was evidence of some confusion about whether future earnings should be expressed in real or nominal terms**
- (4) the absence of any guiding principle about the extent of the appropriate adjustment to the P/E ratio to reflect "lack of marketability". In addition, there was uncertainty about what other factors, if any, should be reflected in the adjustment**
- (5) a common assumption that any theoretical shortcomings in the valuation approach employed are probably relatively unimportant, on the grounds that these are likely to compensate for one another and, if not, will be largely "corrected" in the negotiating process**

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Item 3 above differs from the others in that it reflects as much a deficiency in valuation theory as a failure to recognise an established principle of the theory. Theory unfortunately is unclear about the appropriate adjustment for lack of marketability, or indeed about whether the adjustment should be confined to lack of marketability. The above findings therefore serve to emphasise the need for research into this aspect of the valuation process, with respect to both the size of the adjustment and the degree to which the adjustment should reflect factors other than marketability.

It is not suggested here that practitioners are failing to implement a simple and readily accessible set of valuation rules. Financial theory does not provide a precise rubric which can be relied upon to produce a definitive valuation of a complex business enterprise. Implementing the principles of MPT is rarely a straightforward task, and the capital asset pricing model, for all its simple elegance and logical appeal, has failed to gain unambiguous empirical support. The significance of MPT, however, is not that it simplifies the valuation task, but that it represents a revolution in perspective which deserves to govern the valuation process. Financial economists are virtually unanimous in viewing the capital asset pricing model as the most plausible framework for valuing risky assets, and as unequivocally superior to intuitive perceptions of risk. Some of the principal insights of MPT are counter-intuitive and, outside such a framework, risk assessment is little more than guesswork. Professional judgment alone is unlikely to compensate for an inadequate theoretical base.

Is a Modern Portfolio Theory perspective necessary?

The main conclusion of this study is that valuation practice amongst accountants fails in important respects to reflect current valuation theory. It has to be asked, however, whether an understanding of this theory is really necessary for valuation to be effective? Arguably it is unnecessary only if it can be shown either that a credible valuation method exists which can circumvent the theory, or that the theory has only marginal relevance to what is manifestly a sound valuation procedure.

It has been shown that the primary benefit of the P/E method is that, in principle, it allows the valuer to import the risk and growth estimates of the market without having to address directly the complex issues involved in measuring these variables. Is it not possible, therefore, that the approach, when used correctly, could in practice relieve accountants of the need to consider the fundamental theoretical issues of MPT which determine the capitalisation rate k , and that consequently ignorance of MPT is not a matter of concern?

CONCLUSIONS

It has to be understood that the validity of the P/E approach in valuing any business depends significantly on the comparability of the business with the company(ies) from which the P/E ratio is drawn in terms of (a) their respective accounting methods, (b) their risk characteristics and (c) their growth potential. Adjusting for differences in accounting method is likely to be relatively straightforward, but when fundamental differences exist in the economic structure of the two companies it ceases to be possible to make an adequate valuation without addressing the problem of predicting growth and estimating the capitalisation rate. It might seem sufficient simply to adjust the P/E multiple by some appropriate factor but, in practice, making an informed judgment about the size of the adjustment requires a clear understanding of how the differences between the two companies affect their respective growth prospects and capitalisation rates. Indeed, it could reasonably be argued that, even where perfect comparability does exist, this fact could not be established in the first instance without a reasonable understanding of the respective companies' relevant risk characteristics. For this, a knowledge of MPT is arguably essential.

Finally, the possibility remains that the concerns expressed here reflect the biases of an academic, and may be misplaced. It has already been noted that most of the respondents stressed that the valuation outcome tends to be determined as much by negotiation as by the valuation methods employed. Although not all valuations are the product of negotiation, there seemed to be a widespread belief that the negotiating process may generate a "valuation wisdom" that transcends the theoretical deficiencies of the formal valuation measures. It is, of course, difficult to know whether the valuation process in practice would be made fairer or more effective by a greater infusion of modern valuation theory, but the assumption that, without that infusion, negotiators will unconsciously reflect the important insights of the theory is difficult to credit.

Appendix

Questionnaire used to guide interviews

Does the firm

- (a) use more than one method?
- (b) use a blend of methods?

Does the individual partner or manager have any leeway in the choice of method?

Does the choice of method depend on the purpose of the valuation?

What is the dominant method for nonrevenue commercial valuations?

Does the choice of method depend on which side you represent?

Do you ever use the discounted present value model?

If so, what income flow do you discount?

Cash? Earnings? Dividends?

If not, is this because

- (a) it is too sophisticated?
- (b) it involves too long a perspective?
- (c) the difficulty of finding a discount rate?

Is your choice of method influenced by what other firms do?

General

How far into the future do you estimate expected returns?

How do you estimate risk?

Intuitively?

Systematically?

A SURVEY OF THE VALUATION PRACTICES OF PROFESSIONAL ACCOUNTING FIRMS

What adjustments do you make to allow for risk?

What allowance do you make for inflation?

Do you estimate future flows in real or nominal terms?

Maintainable earnings

Do you ever use the "maintainable earnings" approach?

Is this the same as future maintainable earnings?

What do you mean by maintainable earnings?

If you knew that the company was about to engage in an expansion project in say two years' time would you take this into account in calculating m/e?

If you were valuing on behalf of directors, would you accept their profit estimates?

Dividend approach

Would you ever use a dividend valuation approach?

How would you describe this approach?

Price/Earnings

Do you use P/E ratios?

How would you define a P/E ratio?

Does it imply that you believe the market is a reliable valuer?

Is the comparator usually

- (a) one company**
- (b) a group**
- (c) the industry?**

What figure do you apply the P/E to?

If you were valuing for directors who are selling the business which of the following amounts would you apply the p/e to?

- (a) the most recent annual earnings of £200,000**
- (b) the directors' estimate of the current earnings expected to be £250,000 in six months time**
- (c) the directors' estimate of future average maintainable earnings of £280,000?**

What adjustment do you make for the fact that the company being valued is not listed?

- (a) adjust the capitalisation rate**
- (b) reduce the final valuation**

APPENDIX

Is this adjustment for

- (a) lack of marketability
- (b) additional risk?
- (c) both

What would the lowest deduction for lack of marketability etc be?

What would the average deduction for lack of marketability etc be?

What would the highest deduction for lack of marketability etc be?

Capitalisation rate

If you sometimes use a discount approach, how do you derive the discount rate?

How do you define the risk of a business?

Do you ever consider the relevance of the beta of CAPM?

Would you ever use a real rate of discount?

Under what circumstances?

Capital structure

Do you consider this matters to:

- (a) the value of the shares?
- (b) to the value of the business as a whole?

What effect would it have on your valuation?

Dividend policy

Does this matter?

How would you take it into account?

Asset approach

Do you ever use an asset approach?

Do you formally calculate goodwill?

Under what circumstances?

Further Reading

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Keane S: The Valuation of Shares and Businesses; ICAS (1990).

Sharpe W: Investments; Prentice-Hall, Englewood Cliffs (1985).

A SURVEY OF THE VALUATION PRACTICES OF PROFESSIONAL ACCOUNTING FIRMS

This monograph reports the results of a survey of the valuation methods of accounting firms in Scotland. Although the practices tended to be uniform, they were characterised by a general lack of regard for some of the key principles of modern valuation theory and by a general assumption that the valuation method adopted is of secondary significance in what was perceived to be essentially a process of negotiation.

Simon M Keane is a Professor in the Department of Accounting and Finance at the University of Glasgow, where he has been lecturing for more than 21 years. He obtained his doctorate in Investment Decision Theory from Glasgow and has written widely on corporate finance issues for journals in the UK, Australia and the United States.

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