

**AN EMPIRICAL INVESTIGATION
INTO THE
VALUATION OF UNLISTED COMPANIES
IN THE
NEW ZEALAND COURTS**

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Abstract

The valuation of unlisted companies has received little attention in finance literature compared to the valuation of listed companies. This is despite the fact that the bulk of companies are unlisted (99.9%).[†] This thesis provides the first significant empirical research into the valuation of unlisted companies in New Zealand. The modern finance technique of discounted cash flow (DCF) analysis is posited as being the best way to value unlisted companies as going concerns. It is found that valuation practice in the New Zealand Courts has generally not followed modern finance theory. DCF analysis has received scant usage. Additionally, North American research that has investigated the relevant information (factors) for valuing unlisted companies has been largely ignored in New Zealand.

This thesis investigated Court data over a 19 year time span from 1976 until 1995. All types of cases involving the valuation of unlisted companies were considered. Information was initially analysed by a computer database, followed by a more in-depth study. The primary findings are that notional liquidation and capitalised maintainable earnings are the main valuation methods utilised in the New Zealand Courts. Compromise decisions are often reached by judges (66.7% of the time), but the important valuation factors are rarely enunciated.

Recommendations are made to the Institute of Chartered Accountants of New Zealand (ICANZ). The methods currently being utilised to value unlisted companies in New Zealand are antiquated and need to be modernised. Therefore, the ICANZ should raise standards and stimulate debate in the field. Continuing education courses need to educate valuers on recent developments in modern finance theory, in particular, DCF analysis. This will benefit the Courts as it will give them more transparent and reliable information. Additionally, guidelines on valuation factors would be of value. A number of areas for further research are suggested.

[†] New Zealand statistic from the Registrar of Companies (10th February, 1995)

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Chapter One — Introduction

In the broad field of valuation there is no problem so exasperating, so controversial, and yet so completely fascinating, as the subject of security appraisal. If a corporate stock or bond is freely and actively traded on the public market the task is made easy. It is when the unlisted, untraded and closely held corporate stock has to be valued that the problem gets interesting.

McClellan (1966, p.47)

The valuation of unlisted companies has received relatively little attention in finance literature compared to the valuation of listed companies. However, some of the modern finance techniques utilised to value listed companies may be suitable in the valuation of unlisted companies. This thesis provides the first significant empirical research into the valuation of unlisted companies in New Zealand. It is found that valuation practice in the New Zealand Courts is generally not following modern finance theory. Additionally, a section of American literature that describes the relevant factors for valuing unlisted companies, has received scant attention in the New Zealand literature and the Courts.

The valuation of unlisted companies is not a modern problem. Owens (1972) suggests the possibility that it has its vague origins in an estate management course presented at Oxford University in the time of Henry VIII. Regardless of the history, the problem of valuing unlisted companies is as pertinent today as it has ever been. The growth of matrimonial property cases in recent years has further highlighted the lack of consensus that exists among valuation experts.

This thesis is split into eight Chapters. Chapter 2 provides background information on the valuation of unlisted companies. This includes definitions of terms used in this thesis, a discussion about valuation experts, an examination of whether valuations are an art or a science, a consideration of the purpose for valuations, and an outline of the New Zealand legal and business environment.

Chapter 3 discusses valuation theory, specifically with relation to the valuation methods used in the valuation of unlisted companies. It has been split into two main Sections, modern finance theory and traditional valuation theory.

Chapter 4 outlines prior research into the valuation of unlisted companies. It has been split into three Sections. The first investigates research on the valuation method used. The second discusses research that attempted to derive an objective formula by which to value unlisted companies. The third outlines research into the relevant valuation factors.

Chapter 5 investigates some of the key Court cases in New Zealand that have involved the valuation of unlisted companies. Five cases that provide some of the critical precedents in the New Zealand Courts are analysed.

Chapter 6 details the research method used in this thesis. It includes a discussion on the need for empirical research, the research methods available, and the choice of the legal review method. Additionally, the scope of the research and the means of data collection are outlined.

Chapter 7 provides the results of this thesis. The issues considered in the results are derived from the previous Chapters. The findings provide the first significant empirical research into the valuation of unlisted companies in New Zealand.

Chapter 8 presents the conclusions of this thesis. Recommendations are made to the Institute of Chartered Accountants of New Zealand (ICANZ) based on the results. This is followed by the limitations present, and suggestions for further research. A final thesis conclusion summarises this thesis.

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A. Introduction

The price at which transfer of ownership is effected is often almost an accident of the coincidence of a single pair of many different bids and offers from many different prospective buyers and sellers.

(Fraine, 1961, Foreword)

Company valuation is a broad field, with numerous relevant issues. The disciplines of Accounting, Economics, Finance, and Law have all influenced the development of small company valuation theory and practice (Fraine, 1961). It is important that a background is provided, from which an understanding of the general issues of business valuation can be obtained. Some of the questions raised in this Chapter, although not the primary aim of this thesis, will run straight through into the results (Chapter 7).

First, definitions will be provided for key valuation terms. The role of valuation experts will then be considered, followed by a discussion on the extent to which business valuation is an art or a science. Next, the purposes for business valuations will be outlined. A consideration of the New Zealand legal environment will be followed by a brief discussion on the New Zealand business environment. Finally, a short summary will be provided.

B. Definitions

It is first important to define many of the terms used both in this thesis, and the literature. This section will provide definitions of companies, unlisted companies, shares, value, and the distinction between open and notional valuations.

I. Companies

Section 15 of the New Zealand Companies Act 1993 states that companies are legal entities separate from shareholders. This developed from the House of Lords case *Salmon v Salmon & Co Ltd.*¹

Associated with the separate personality idea is the existence of limited liability. All companies incorporated under the Companies Act 1993 have limited liability, unless the particular companies constitution says otherwise: s 97(1). With limited liability companies, the liability of shareholders is restricted to: (s 97(2))²

- I. the original purchase price of their shares;
- II. any liability imposed on them by the constitution;
- III. any liability they may incur as a result of being defined as directors;
- IV. any liability to repay distributions; and
- V. any liability where a share renders the shareholder liable to calls.

II. Unlisted Companies

An objective means to group companies is to categorise them on whether they are listed or unlisted on the New Zealand Stock Exchange. In New Zealand there are 162,488 registered companies, of which only 174 (0.1%) are listed on the stock exchange.³ Companies not listed on the stock exchange are distinguished by the lack of an active market for their shares. These companies often require the services of valuation experts to place a value on their shares, and therefore are the subjects of this thesis.

¹ [1897] AC 22.

² Clarified by Beck and Borrowdale (1994, p.7).

³ Registrar of Companies (10th February, 1995).

A number of North America researchers investigate closely-held corporations, which is an alternative means of classifying companies. Jensen (1978, p.239) defined a closely-held corporation and related terms:

A corporation with shares held either by a single stockholder or by a closely-knit group of stockholders or with its shares not being publicly traded is variously recognized as a close corporation, closed corporation, family corporation or incorporated partnership.

A similar line was taken by McClellan: (1966, p.48)

By closely held, I mean those corporations which have their capital stock owned by relatively few stockholders, perhaps within a single family group, and which have none of their stock offered or traded on the public market.

This is related to the concept of a “private company”, which until 1993 existed in New Zealand under the Companies Act 1955. The distinction is no longer made at law, however: (Beck and Borrowdale, 1994, p.10)

In practice, there will continue to be a distinction between large companies and small or “closely held” companies. The latter type of company is likely to adopt a constitution which makes it similar to the old private company, and will rely mainly on its shareholders for finance.

III. Shares

Section 35 of the Companies Act 1993 makes it clear that shares are personal property. The Act (s 36) sets out the following rights attaching to shares:

- I. the right to vote on poll at a meeting of the company on any resolution;
- II. the right to an equal share in dividends authorised by the board; and
- III. the right to an equal share in the distribution in the surplus assets of the company.

The value of a parcel of shares may differ from the value of the company as a whole, due to its level of control. A related issue is the conditions which may exist on the right to transfer shares. Unlisted companies will commonly require that shares are first offered to existing shareholders at a fair value. Such a restriction is now included

in the Constitution of companies, which replaces the Articles and Memorandum of Association from the previous Companies Act 1955. The valuation of minority interests is discussed in Chapter 3.

IV. Value

Value is a matter of perception. What may be value for one person, may not be value for another (Brown, 1991). Nevertheless, a noted American authority on property valuations, Bonbright (1937), emphasises the importance of defining value:

What is called the theory of appraisal is a systematic treatment of two problems that arise in every valuation of property. The first problem is to secure a definition of value acceptable for the purpose of the particular inquiry. The second problem is to determine the method by which the quantum of this value shall be estimated.

The Courts have over the years developed a widely accepted definition of value as pertaining to business valuations. Bonbright (1937) points out that such a definition needs to follow economic reality, and be consistently implemented by the Courts:

As long as common law and statute law persist in using the term 'value' as a legal jack-of-all-trades, judges are forced, willy-nilly, to reject the precedent of economists and to follow instead the precedent of Humpty Dumpty (from Through the Looking Glass): 'When I use a word it means what I choose it to mean — neither more nor less'.

A number of variants of the term value are used in practice. Callard and Pallot (1994) outline some of the often quoted “values”. This is shown in Table 1.

Table 1: Often Quoted Values (Callard and Pallot, 1994, p.22)

Market Value	Fair Market Value	Going Concern Value
Realisable Value	Most Probable Value	Open Market Value
In Situ Value	Replacement Value	Liquidation Value
Insurable Value	Scrap Value	Depreciated Value

Different countries may use varying definitions for these value terms. The United Kingdom (U.K.) case *Domglas Inc v Jarislowsky, Fraser & Co Ltd*⁴ recognised a distinction between fair market value and fair value. In this judgment the Courts ruled (for a squeeze out transaction) that fair value is the market value without any discount for minority interest, or premium for forcible taking. Glover (1987) makes two important points with regard to the distinction between the two value terms:

- I. Fair value must be different from market value, if it was not, then the Articles of Association would use the more generally recognised market value concept.
- II. The essence of fair value is that it is equitable to both parties. It recognises the absence of an open market.

Hagen (1987, p.5) laments that New Zealand Courts have not followed this approach: “*I do not believe this relatively fine distinction between fair market value and fair value is well established in our own market place*”. One of the objectives of this thesis will be to determine if this distinction, or any others regarding value terminology, are recognised in the New Zealand Courts.

Regardless of this confusion, perhaps the most common term used is that of fair market valuation. One of the earliest statements on fair market valuation is that of Griffith C.J. in *Spencer v The Commonwealth*:⁵

In my judgment the test of value of land is to be determined, not by inquiring what price a man desiring to sell could actually have obtained on a given date, ie., whether there was in fact on that day a willing buyer, but by inquiring ‘What would a man desiring to buy the land have had to pay for it on that day to a vendor willing to sell it for a fair price but not desirous to sell?’ It is, no doubt, very difficult to answer such a question, and any answer must be to some extent conjectural.

A similar line was taken in an early United Kingdom Act, s25 Finance (1909-10) Act 1910:

⁴ 138 DLR 3D.

⁵ (1907) 5 CLR 418.

The gross value of land means the amount which the fee simple of the land, if sold at the time in the open market by a willing seller . . . might be expected to realise.

Two key concepts are the open market, and a willing seller. These can be seen flowing directly through to modern definitions like that of Lonergan (1993, p.8) which he presented in a Institute of Chartered Accountants of New Zealand (ICANZ)⁶ continuing education paper:

The price that would be negotiated in an open and unrestricted market between a knowledgeable willing but not anxious buyer and a knowledgeable willing but not anxious seller acting at arm's length.

Lonergan (1993, p.8) comments that this definition implies that there is a hypothetical purchaser who is:

- I. willing but not anxious (that is, not a “special purchaser”);
- II. fully informed of the relevant facts;
- III. prudent (that is, not a gambler);
- IV. will pay a fair price rather than miss out;
- V. will invest in anything available in the market; and
- VI. tax neutral for investment purposes (that is, has no tax incentive to bias the decision in favour of, or away from a particular investment).

The points’ two, three, five, and six appear to derive from the idea of an open market. The problem arises where there is no open market, as illustrated in an often quoted statement by Danckwerts J. in the U.K. estate duty case *Holt v Inland Revenue Commissioner* (1953):⁷

The result is that I must enter into a dim world peopled by the indeterminate spirits of fictitious or unborn sales. It is necessary to assume the prophetic vision of a prospective purchaser at the moment of the death of the deceased, and firmly to reject the wisdom which might be provided by the knowledge of subsequent events . . . It seems to me that their (experts) opinions are indeed properly described as guesswork, though of course it is

⁶ The ICANZ was known as the New Zealand Society of Accountants (NZSA) before 1 October 1996.

⁷ (1953) 2 ALLER 1499.

intelligent guesswork aided by the experience which they have gained from their work.

This is consistent with the *Hatrick*⁸ case in New Zealand, and numerous other cases in Australia, Britain and elsewhere. If there is no open market “... then (the) court must ascertain as best it can what a man desiring to buy the shares would have to pay for them on the day to a vendor willing to sell at a fair price, but not desiring to sell” (*Hatrick*).⁹

Thus, guidelines as to the determination of fair market value have been defined by the Courts. Brown (1992, p.6) argues that the type of definition used by the Courts is not so much a test, but “... rather, a principle by which courts are to be guided in determining whether a method of valuation determines what is or what is not fair value”.

This in turn, because of the use of expert evidence to determine fair value, has lead to a situation where “... the establishment of case-law follows in the wake of accounting thought and practice and developments in commercial conditions” (Adamson, 1986, p.57). Therefore: “Valuation is in general not a matter of law but of commercial judgment, which the courts will rarely review” (Gregory and Hicks, 1995, p.57).

V. Open and Notional Valuations

Valuations are commonly classified into two categories: open valuations, and notional valuations. Open valuations involve those situations where there is a transfer of shares in the real/open market. By contrast, notional valuations occur when shares need to be assessed outside of the traditional market, for example, with a matrimonial property dispute settlement. Hagen (1987) summarises the differences between the two types of valuation in Table 2. The possibility of the notional/open distinction influencing the valuation obtained is further discussed in the Purpose of Valuation section of this Chapter.

⁸ *Hatrick v CIR* [1963] NZLR 641.

⁹ *Hatrick v CIR* [1963] NZLR 641.

Table 2: Open v Notional Valuations (Hagen, 1987, p.6)

Open Market	Notional Market
May include non arms length parties	Assumes arm length parties only
Includes sentimental value	Assumes economic value only
One party may not be as informed as the other	Assumed equally informed
One party compelled to transact	Assumed equally uncompelled
Could include booms and panics	Consistent market assumed
Restrictions a possibility	Free open unrestricted market assumed
One party stronger financially	Assumes equal financial strength
One party better at bargaining	Assumes equal bargaining
Not always highest price	Highest price assured

C. Valuation Experts

Valuation experts play an important role in both Court and non-Court valuations. The 16th century English Court case *Buckley v Rice Thomas*¹⁰ established the role of expert evidence. Expert testimony is acceptable when matters of science and specialised areas of knowledge and practice are required for the Court to come to a decision. Business valuation is very much a specialist area. Judges and lawyers cannot be expected to have a detailed knowledge of the field. Hence, in most Court cases involving business valuation disputes, expert evidence will be tabled.

The qualifications and backgrounds of valuation experts will vary in nature. In particular, four professions appear to be involved in New Zealand:

- I. *Accountants*: A large number of business valuations are performed by accountants, who apparently dominate the industry both in terms of the number of valuations performed, and the literature written in the field. The ICANZ runs regular courses/conferences on business valuation practice.¹¹
- II. *Registered valuers*: Occasionally, members of the New Zealand Institute of Valuers (registered valuers) undertake business valuations in New Zealand.

¹⁰ (1554) 1 Pl 118.

¹¹ The ICANZ recently held a conference in Christchurch on 14 June 1995. Frequent continuing education papers are produced for the ICANZ, the latest being that of Burn (1995). The New Zealand Law Society also runs seminars on matrimonial property valuation issues, involving both accountants and lawyers (for example, Hicks, Walton, and Watts, 1992).

Their expertise is normally derived from experience at valuing land and similar property. Two examples are provided by, Tiller (1990) who discusses Petrol Station valuations, and Archbold (1994) who considers the valuation of Rest Homes and Hospitals.

- III. *Sharebrokers*: Sharebrokers often complete analyst reports on the value of companies for clients, so naturally, they have been employed in Court cases. An early New Zealand example of this was *In Re Monro (Deceased): Turnbull Anor v The Commissioner of Stamp Duties*,¹² where a sharebroker was called as an expert witness to value the shares in a shipping company.
- IV. *Merchant/Investment Banks*: Investment banks are increasingly involved in share valuations, often concerning complex takeover transactions. An example of this is provided by Gaynor (1995) who discusses Southpac's independent valuation concerning the Skellerup bid for Noel Leeming.

Valuation experts from these professions will bring different experience, qualifications and expertise to the role of business valuation expert. This thesis will investigate who are undertaking the valuation of unlisted companies in New Zealand. This information should be available, because, as Hubbard (1990, p.28) points out:

In practice, most experts state formal academic qualifications, their years of experience in the corporate advisory/valuation business, their position in the firm and any relevant qualifications they may possess (e.g. having worked in a particular industry).

D. Valuation, an Art or a Science?

Clearly the Courts aim to determine value on the basis of commercial judgment. Yet to what extent has commercial judgment developed with relation to business valuations? A controversial issue in accounting has been whether or not accounting is an art or a science. The valuation of unlisted companies is viewed as one of the most subjective areas of accountancy. Not surprisingly a protracted debate has developed over whether business valuation is an art or a science. This debate hinges on defining the terms art and science; a problem that is beyond the scope of this thesis. However, a

¹² [1944] CLR 58.

brief discussion on the different arguments for and against company valuation being considered an art or a science will now be undertaken.

Lonergan (1993, p.7) has recently asserted that the valuation of shares is a science:

Today, however, there is no doubt that valuations are very much a science and any practitioner who attempts a valuation without a thorough understanding of the science is more likely than not to be found on the receiving end of a professional negligence suit.

There is little doubt that the implementation of the specific methods to given estimates is scientific in nature, yet the estimation process is fraught with subjective judgments. McClellan (1966, p.47) makes the following points, which illustrate how judgmental the valuation process ultimately is:

- I. There is an infinite variety of circumstances which can occur in valuation problems; in other words, each is a unique situation.
- II. There can be no formal prescribed method of valuation, only general guides can be set forth.
- III. There is no one “right” answer — only the best judgment of the individual trying to find the answer.
- IV. There will always be differences of opinion among real or self-styled experts. Such differences can be explained by the respective variation in emphasis which is accorded each valuation factor.
- V. There exist, however, realistic and tangible aids or approaches which can be relied upon to lead to a reasonable conclusion. We do not just have to guess or pull a figure out of the air.

Similar views are held by Glover (1987, p.6), who asserts that:

Most valuations done by experts proceed 90 per cent of their distance on well defined principles . . . There is nothing complete or absolute about the figure, and others may disagree, but the amount decided upon is still his opinion of the value.

Gregory and Hicks (1995, pp.67-68) in a recent United Kingdom article on company valuation concluded: “*From this it should be clear that valuation is an art and not a science; that there are many possible bases on which a valuer may make a*

valuation". McCarthy (1994, p.116) also stated valuation is an art: "*Valuing a business is not a science with universal formulas. Instead it is an art that can use any of several accepted methods*". Another who feels business valuation is an art is a New Zealand practitioner Hayde (1992, p.66): "*The valuation of a business is an art and not a precise science*".

The Courts have traditionally taken the approach that valuation is an art. This can be seen in a classic House of Lords statement by Viscount Simon (*Gold Coast Selection Trust Ltd v Humphrey*):¹³

Valuation is an art not an exact science. Mathematical certainty is not demanded, nor, indeed, is it possible. It is for the Commissioners to express in the money value attributed by them to the asset their estimate, and this is a conclusion of fact to be drawn from the evidence before them.

Perhaps valuation could be made more scientific if a different approach was taken to the discipline. In a discussion on accounting being an art or science, Sterling (1975) argued that the way accounting issues are defined has made them unresolvable, and therefore, unscientific. If business valuation laws were prescribed concerning the valuation method/factors to be used (for example, a formula based on previous years earnings), then the judgmental/artistic aspects could be greatly reduced. Much of the literature advocating a specific formula based approach to valuation can be viewed as attempting to attain this goal.¹⁴ However, with a concept as vague as value, such an approach may inevitably lead to the Humpty Dumpty analogy of Bonbright (1937), whereby the meaning of value is distilled to the point where it no longer corresponds to most peoples (or economists) understanding of it.

A simple, yet unsatisfactory way around the debate is to avoid it. Maxson (1993, p.58) does this effectively in his conclusion: "*While the **scientific art** of business valuation requires experience and judgment . . .*".

¹³ [1948] AC 459.

¹⁴ This literature is discussed in Chapter 4.

E. Purpose of Valuation

Company valuations may be required for a number of purposes. Attempts at determining the purpose for valuations abound.¹⁵ Two New Zealand attempts are Blair (1990) and Pricer, Vos, and Dixon (1987).

Blair (1990, p.2) classifies private share valuations into three broad categories:

- I. Valuations governed by legislation:
 - (a) for death or gift duty purposes; or
 - (b) for compensation purposes where shares are compulsorily acquired.
- II. Valuations for matrimonial property purposes.
- III. Valuations for commercial purposes: these generally involve actual or contemplated sales from one party to another. Circumstances will range from complete takeovers to minor changes in family holdings.

Pricer, Vos, and Dixon (1987) give examples of situations where accountants may be asked to make business valuations:

- I. placing a value on the founder's interest in a business;
- II. sale of interest in a firm to outsiders;
- III. the addition of investors with the resulting reduction or dilution in ownership percentage;
- IV. the sale or purchase of a business;
- V. insuring tangible assets;
- VI. insuring key partners or individual owners;
- VII. estate planning;
- VIII. financing; and
- IX. buy-sell agreements.

¹⁵For example, some New Zealand examples can be found in: Pope 1972; Hagen 1987; Hayde 1990 etc.

Point seven above is no longer as relevant to New Zealand, because estate duties were abolished from 17 December 1992. Clearly there are a wide range of reasons for valuing unlisted companies. Thus, a significant question is whether or not the purpose for the valuation affects the valuation process. Like most issues in the valuation field, opinions differ.

An anonymous New Zealand Barrister and Solicitor felt that the purpose for the valuation should not effect the valuation of the firm, unless there is an express statutory direction (which does not exist in New Zealand): *"It makes no difference for what purpose the valuation is required, and there cannot be one value for one purpose and another value for another purpose"* (The New Zealand Valuer, 1964, p.139).

However, this opinion is not universally held. A valuation expert hired to value a firm for potential purchase may adjust the valuation to account for the possibility that the new owners will be able to increase income prospects (for example, via synergy with the purchasers business operations). Such a valuation figure, although reflecting the worth of the investment to the purchaser, may exceed the fair market value in a notional valuation. This describes the situation of a "special purchaser". Debate exists over whether the term fair market value includes special purchasers. In *Hatrick*¹⁶ the ruling was made that isolated special purchasers can be ignored in the notional market.

Little research appears to have been conducted on the question of whether the purpose for a business valuation affects its value. One of the few to do so was Kantor (1987a,b), who found insignificant differences between the approach taken by open valuers (valuations for actual or potential share transactions) and notional valuers (valuations for tax or estate purposes) in Canada.

Another question considered by this thesis is whether or not valuation experts will change their appraisals based on the party they are representing. For example, if the Courts are simply taking an averaging approach to valuation, then it will be beneficial to the owner of the shares to obtain the highest possible valuation. However,

¹⁶ *Hatrick v CIR* [1963] NZLR 641.

an American valuation expert, Gary Trueman, emphasises the danger of such an approach (Dennis, 1992, p.84):

The idea is to retain objectivity rather than be the ultimate advocate for your client . . . The biggest number isn't going to do one bit of good if it's not justifiable, because the client will end up in protracted litigation that will never settle.

Keane (1992, pp.12-13) investigated this possibility:¹⁷

The interviewees were asked whether the choice of valuation method depended on the reasons for valuation, and 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 a client to use a particular method. However, although the method was not affected by which side the firm represented, sellers or buyers, 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 their clients interests.

F. New Zealand Legal Environment

The New Zealand legal environment will now be briefly outlined to provide a context for this thesis. The New Zealand legal system directly descends from English law. Under English law a distinction was traditionally made between colonies acquired by conquest or cession from a recognised power, and those which were acquired by settlement. New Zealand is generally considered to have been acquired by settlement, with the Treaty of Waitangi not viewed as a statement of cession (Hinde, 1982). Hence, English law was introduced into New Zealand by way of the English Laws Act 1858 as it (English law) existed at 14 January 1840. Although most English statutes have since been superseded by New Zealand counterparts, English legislation is still often used as a model for New Zealand legislation. Consequently, English common law decisions will often directly influence New Zealand judgments.

¹⁷ The work of Keane (1992) is discussed in more detail in Chapter 4.

The next sub-section outlines the hierarchy of the Courts in New Zealand. The question arises as to whether different levels of Court influence the valuation of unlisted companies in different manners. For example, the Family Court may give higher regard to the need for an equitable resolution than the High Court.

I. Court Hierarchy

The New Zealand Courts are, in ascending order, the Disputes Tribunal, the District Courts (some Judges of which have jurisdiction in the Family Courts), the High Court and the Court of Appeal. Additionally, there is sometimes the right of appeal to the Judicial Committee of the Privy Council which sits in London.

a. Disputes Tribunal

The Disputes Tribunals Act 1988 instituted the Disputes Tribunals. They replaced the previous Small Claims Tribunals which were covered in the Small Claims Tribunals Act 1976, and were given slightly wider powers. Administratively, Disputes Tribunals are divisions of District Courts. The primary function of Disputes Tribunals is to assess whether in all the circumstances it is appropriate for the tribunal to negotiate an agreement. Disputes Tribunal cases are typically small in nature, with the disputed amount being less than \$3000, or less than \$5000 where both parties agree to the Tribunals jurisdiction. As such, very few business valuation cases will proceed under the Tribunal, as they typically involve larger sums of money.

b. District Courts

In 1980 the District Courts were formed, replacing the previous Magistrate Courts. This occurred with the implementation of the District Courts Amendment Act 1979 which built upon the District Courts Act 1947. The District Courts jurisdiction is limited with regards to contract, tort and any claim under a statute or regulation to claims not exceeding \$200,000. However, part of the claim can be abandoned. Also, by mutual agreement of the parties the District Courts jurisdiction can increase. Therefore, smaller business valuation cases may come under the jurisdiction of District Courts. District

Courts are not bound by other District Court decisions, but are bound by the decisions of all Courts superior to them.

c. Family Courts

Family Court Judges are District Court Judges. The Family Courts jurisdiction is granted by the Family Courts Act 1980 and the Family Proceedings Act 1980. Previously there existed the Courts Marital Appeal Court established under the Courts Marital Appeals Act 1953. The Family Courts jurisdiction gives it the right to deal with marriages, divorce, adoption, guardianship, matrimonial property and a number of other matters connected with the family. Consequently, a number of business valuation cases are heard in the Family Courts, particularly divorce cases.

d. The High Court

The High Court of New Zealand was called the Supreme Court of New Zealand until 1980. It is constituted under the Jurisdiction Act 1908. It has unlimited common law and equitable jurisdiction, and is the Court of general jurisdiction in civil proceedings. Additionally, the High Court hears appeals from the District Courts. A large number of important business valuation cases are heard in the High Court. The High Court is not bound by its own decisions, however, Judges will usually follow the decisions of other Judges as a matter of judicial comity. Decisions of the Court of Appeal, and Privy Council are binding on the High Court.

e. The Court of Appeal

The Court of Appeal is also constituted by the Jurisdiction Act 1908. It has a number of permanent Judges, although High Court Judges also sometimes sit as members. The Court of Appeal normally sits with three Judges. It hears appeals from the High Court and appeals from the District Court if the High Court has granted leave. The Court of Appeal is bound by its own decisions, but on occasion will instead follow decisions of overseas Courts, for example, the House of Lords. The Court of Appeal is bound by Privy Council judgments, both New Zealand cases and otherwise. The House

of Lords has a strong influence, however, its decisions are not binding. Recently, a number of important business valuation cases have been heard in the Court of Appeal.¹⁸

f. The Privy Council¹⁹

Appeals to the Judicial Committee of the Privy Council must either have been granted leave from the Court appealed from, or occasionally, by special leave of the Judicial Committee itself. The Privy Council sits in London, sometimes with a New Zealand Judge as a member. The rules for appeals are governed by “the 1910 Rules” and “the 1957 Rules”. A few key business valuation cases have proceeded through to the Privy Council.²⁰

II. Statutory Influence on Valuation

The Stamp Duties Act 1954, Estate and Gift Duties Act 1968, Matrimonial Properties Act 1976 and Companies Act 1955 have all given rise to the need for unlisted company valuations (additionally, valuations will sometimes be required for compensation purposes under a variety of acts, whereby damages will need to be assessed). However, these New Zealand statutes have not strongly influenced the process of unlisted company valuations, with none of them laying down any method for the valuation of shares. New Zealand legislators have generally not prescribed set rules for valuation with the exception of one issue; Section 59 of the Stamp Duties Act 1959 provided that when computing the value of shares any restrictions attached to the sale or transfer of shares were to be treated “... *as if no such restrictive conditions existed*”. Similar legislation was enacted in Section 22 of the Estate and Gift Duties Act 1968. The Estate and Gift Duties Amendment Act 1978 amended this by allowing the Commissioner of Inland Revenue to ignore this section and accept the restrictions where the Commissioner is satisfied it is reasonable (for example, with employee share schemes).

¹⁸ For example, *Holt v Holt* [1987] 1 NZLR 85 and *Pountney v Pountney* unreported (Hardie Boys J., 20/09/91, Court of Appeal, CA 45/91).

¹⁹ The Privy Council is a separate body from the House of Lords.

²⁰ For example *Holt v Holt* [1990] 3 NZLR 401.

Stamp Duty on the transfer of shares was repealed on 24 March 1988 by the Stamp and Cheque Duties Amendment Act (2) 1988. Estate duties were repealed on 17 December 1992, although gift duties remain under the Estate and Gift Duties Act 1968. The only other piece of legislation which directly gives rise to the need for unlisted company valuations is the Matrimonial Properties Act 1976.

Cases brought under the Estate and Gift Duties Act 1968 generally involve a dispute between a taxpayer and the Commissioner of Inland Revenue concerning the value of a business for taxation (now only gift duty) purposes. Companies Act 1955 valuations are normally concerned with assessing damages, or compulsory buy out prices, when there is found to be oppression against minority shareholders. The Matrimonial Properties Act 1976 has had a profound impact on business valuation in recent years. This is due to the increasing incidence of divorce conflicts. The adversarial nature of these disputes often leads to company valuation issues being settled in the Courts. This is reflected in the recent growth of Family Court (and District Court) business valuation cases.

Another issue, is whether the particular legislation affecting a given valuation influences the valuation method used. Burn (1995, p.26-28) discussed a case under the Matrimonial Properties Act 1976, *Page v Page*,²¹ where Speight J. ruled that a notional liquidation approach was not applicable, because one party would remain on the matrimonial property: (p.115)

... I think the notional liquidation approach is not totally applicable in that in such calculations allowance is made for expenses of realisation such as estate agents commission, legal and other expenses, and a percentage discount to represent the profit that a purchaser would expect to make out of a liquidation. For the reasons outlined by Mr Carter in his criticisms I think that though perfectly legitimate in the case of an ordinary private company dissolution, it is inappropriate in a matrimonial property case in circumstances such as prevail here where one or other party will probably remain on the property. There will be no transfer of land but merely shares in accordance with directions from a Court order, and for those reasons I do not take into account Mr Bridgeman's (the valuer) allowances for costs and a percentage profit.

²¹ 5 MPC 114

Burn gave the example of *Pountney v Pountney*,²² a judgment delivered by Hardie Boys J. in the Court of Appeal, that did not settle the matter: (pp.18-19)

It is well settled that the valuation of shares for the purposes of the Matrimonial Property Act is no different an exercise than for other purposes. It requires an enquiry as to the value at which a willing but not anxious vendor would sell and a willing but not anxious purchaser would buy . . . it is essentially a practical question . . . any differences in emphasis or approach that might emerge in the valuation exercise should be resolved in the way best calculated to achieve the statutory purpose of a just division of matrimonial property. And, that it must be so, provided always that is done consistently with overriding valuation principles.

Burn (1995, p.28) stated the cases he considered to support a deduction of liquidation expenses for matrimonial property. These are displayed in Table 3.

Table 3: New Zealand cases which support the deduction of liquidation costs (Burn, 1995, p.28)

Case	Reference
<i>Harlick v Harlick</i>	(Auckland M533/82, 1983)
<i>Johnston v Johnston</i>	(1984) 3 NZFLR 65
<i>Flett v Flett</i>	(1985) 3 NZFLR 487
<i>Holt v Holt</i>	(1986) 4 NZFLR 339
<i>Clark v Clark</i>	(Christchurch M292/87, 1988) ²³
<i>Sanders v Sanders</i>	(Christchurch M230/87 1990)

G. New Zealand Business Environment

A consequence of New Zealand's small size is that industries are often very difficult to define. Therefore, industry data is frequently unreliable in nature. However, one industry which is easy to define, and proportionately larger than for most other countries, is the agricultural industry.²⁴ Many valuation cases concern farming companies, including some of the most important judgments in recent years, for

²² unreported (Hardie Boys, McKay, Casey JJ., 20/09/91, CA, CA 45/91)

²³ Now reported: (1989) 4 NZCLC 64809.

²⁴ Primary product exports of wood and wood articles, meat, dairy produce and wool accounted for 41.8 percent of all exports in the March 1995 year (Key Statistics, 1995, p.7).

example, *Holt v Holt*²⁵ and *Hatrick*.²⁶ The possibility that a particular industry effects the valuation obtained cannot be discounted. An attempt will be made in this thesis to consider industry influences on valuation.

H. Chapter Summary

This Chapter provides a background for this thesis. Relevant issues on the valuation of unlisted companies have been discussed, and will now be summarised.

Some of the common terminology has been defined. Unlisted companies are those not listed on the New Zealand stock exchange. The bulk of companies in New Zealand are unlisted (99.9%). These companies may require the services of valuation experts to place a value on their shares; and are the subject of this thesis. Value is a matter of perception, and therefore is difficult to define. However, internationally the Courts have developed a widely accepted definition for the valuation of unlisted companies — the value that would be negotiated by a willing but not anxious purchaser and a willing but not anxious seller.

The valuation of unlisted companies is a specialist field. As such, the Courts will normally consider expert evidence. The Institute of Chartered Accountants of New Zealand runs regular courses in this area for the benefit of its members. This is because accountants have traditionally been heavily involved in the valuation of unlisted companies. However, other professionals may also be involved in valuing unlisted companies.

An interesting question is whether or not the valuation of unlisted companies is an art or a science. It is beyond the scope of this thesis to define the terms art or science, however, a discussion on some of the arguments was presented. Undoubtedly the implementation of specific methods to given estimates is scientific in nature,

²⁵ [1986] 4 NZFLR 339

²⁶ *Hatrick v CIR* [1963] NZLR 641.

however, the estimation process is fraught with subjective judgments. What is clear, is that without a set formula to value unlisted companies, it will always be a judgmental process. Whether an adequate formula approach can be developed, is an issue that will be discussed in Chapter 4.

Unlisted Company valuations may be required for a number of purposes. These include valuations governed by legislation, for matrimonial property disputes, and commercial purposes. Few studies have investigated if the purpose for a given valuation influences the method used. Additionally, there has been scant research into whether expert witnesses will be biased by the clients they are representing.

Statutes in New Zealand do not lay down rules for the valuation of unlisted companies. Rather, it is left to case law and commercial judgment to determine the appropriate methods. One issue that has not been resolved, is whether valuation methods should be changed in matrimonial property cases to reflect the particular nature of the Matrimonial Properties Act 1976.

Due to New Zealand's small size, it is very difficult to define industries in the economy. One industry that is proportionately larger than for most countries, is the agricultural industry. This thesis will consider whether farming companies are valued in a different way from other firms.

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A. Introduction

The proponents of discounted cash flow analysis argue that investors look at cash returns rather than earnings on an accounting basis. Empirical evidence supports such arguments.

Brown (1991, p.18)

The determination of an unlisted companies value is a judgmental affair. However, a body of literature has developed, which can assist those involved in valuations to reach an acceptable outcome. This Chapter discusses the theoretical, and practical validity of a range of valuation methods.

The method of a given business valuation is often an integral aspect in justifying the result obtained. However, the relative importance of the method for valuation is a matter of debate. The Courts in New Zealand have emphasised that the market value obtained is more important than the valuation method. This is given in the judgment by Turner J. and McCarthy J. in *Hatrick*:²⁷

There are various methods or lines of approach to this test which have been accepted over the years, and in some cases approved by the Courts; for example, the assets-value method, the dividend yield method. But the method of approach must not be elevated to become test itself: it is only an aid to ascertain the market value.

Nevertheless, Court judgments normally comment on the valuation method used, and often discuss a particular methods appropriateness. An example of this, is in *New Zealand Insurance Co Ltd v CIR*,²⁸ where Cooke J. discussed the type of asset valuation that should be used.

Most of the methods used in the valuation of unlisted companies have their origins in finance theory and economics. However, many of the techniques advocated (for example, capitalised maintainable earnings) are no longer used by finance theorists.

²⁷ *Hatrick v CIR* [1963] NZLR 641.

²⁸ [1956] NZLR 501, this is discussed in Chapter 5.

Consequently, this Chapter is split into two Sections, (modern) finance theory, and traditional valuation theory.

B. Finance Theory

Researchers in the unlisted company valuation field are increasingly advocating the application of modern finance theory to the valuation of unlisted companies (for example, Brown (1991), Keane (1992) and Gregory and Hicks (1995)). The validity and suitability of applying finance theory to the valuation of unlisted companies will now be discussed.

One criticism that can be levelled at much of modern finance theory, is that it is dependent on the efficient market hypothesis (EMH) holding. The EMH, and recent research into it, is discussed in Appendix I. There is little doubt that the unlisted company market is inefficient. However, this problem (particularly concerning lack of information) cannot be avoided with either finance theory, or traditional valuation techniques. By outlining the important factors (information) in a given valuation, many of the assumptions present when making estimates become apparent. Research into these factors is discussed in Chapter 4.

I. Discounted Cash Flow Analysis

Finance theory prescribes that the going-concern value of any asset or business will depend upon the future benefits (cash flows) expected from that asset, and on the discount rate (cost of money). The discount rate is used to discount the cash flows accruing to the investor to produce the present value of the asset, or discounted cash flow value (Gregory and Hicks, 1995). The basic formula is displayed in Equation 1.

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

Key: PV = present value; C_n = cash flow in period n ; k = discount rate.

Three variables will need to be estimated to complete a DCF analysis: future cash flows, time period, and the discount rate. Additionally, when the time period of the future cash flows is not known with accuracy (or is not finite), then a residual value will need to be calculated.

a. Estimating Future Cash Flows

The estimation of future cash flows is a difficult yet essential element in a DCF analysis. Past data on cash flows, available from previous cash flow statements, can be a valuable input for assessing trends. Many companies in New Zealand have provided cash flow statements for a number of years. However, where these are not available, cash flow statements can be easily derived from traditional financial statements. One of the simplest ways to estimate future cash flows from past data, is through the use of regression analysis. Ordinary least squares regression allows linear trends in data to be ascertained more accurately than by the naked eye (Brigham and Gapenski, 1991).²⁹ The ordinary least squares equation is well known, and easily calculated by computerised spreadsheets. The basic model for ordinary least squares regression, is presented in Equation 2.

Equation 2: Regression Analysis

For the line: $y = mx + c$

The ordinary least squares regression equations are:

$$m = \frac{\sum xy - \frac{\sum x \sum y}{n}}{\sum x^2 - \frac{(\sum x)^2}{n}} \quad c = \sum \frac{y}{n} - m \left(\frac{\sum x}{n} \right)$$

Key: y = independent variable (cash flow), c = vertical intercept, m = slope of line,
 x = dependent variable (time), n = number of data points.

²⁹ More complex, non-linear regression models are available. Additionally, equity analysts in heavily traded markets are now using highly advanced techniques, such as ARCH (autoregressive conditional heteroskedastic) models, which require more data than is available from unlisted companies.

Although regression analysis is a simple concept (a statistical means to find a trend in data), Burn (1995) illustrates the confusion it can cause with a quote from Blanchard J. in a 1994 High Court Case:³⁰

As I explained to counsel at the hearing, I have scarcely any mathematical knowledge and no understanding of regression analysis, even after listening to evidence on the subject, it was like hearing evidence in Swahili without the advantage of an interpreter.

The main problem with using past data to estimate future cash flows, is that the past is not necessarily a good predictor of the future. Although past data provides a starting point, other factors are likely to be equally as important to future performance. Brown (1991, p.9)³¹ states that:

... The valuer must implicitly take account of the organisation value of an asset which historic [sic] data cannot handle. For instance, the valuer should consider in minute detail the future plans of a company ...

In particular, Brown (1991, p.9) emphasises the importance of three questions:

- I. How large is the market in which sales growth is forecast?
- II. Will the market grow or will it decline as substitute products enter?
- III. What are competitors doing, or likely to do?

The literature concerning the factors that may be important in the assessment of cash flows, is discussed in Chapter 4.

b. Estimating the Time Period

There is no difficulty in choosing the time period when using discounted cash flows to value a project with a finite life, for example, a joint venture. Perhaps because of this, discounted cash flow analysis has proven particularly popular in assessing the value of mining companies, which consist largely of finite projects (Hubbard, 1990). However, most companies are going-concerns, and have no predetermined life.

³⁰ This case was not referenced by Burn (1995), except to say that it was unreported.

³¹ For this statement, Brown references Hancy and Jackson (1988) and Robinson (1989).

Choosing a discount period for these firms will be a matter of judgment, and will require the determination of a salvage value at a given point in the future. Hubbard (1990, p.37) states that: *“Apart from mines with predictable lives, a five-year minimum period of analysis should be performed with sensitivity analysis”*. Lonergan (1993, p.28) gives a maximum time period: *“Because of difficulties in estimating cash flows over an extended period, it will normally be inappropriate to go much further than about 10 years”*.

To estimate the residual value³² of the firm (which will be the final benefit in Equation 1 discounted to its present value), Lonergan (1993, p.29) suggests the use of the constant growth in perpetuity formula, displayed in Equation 3. This formula assumes net cash flows will grow at a constant rate in perpetuity, and will use the same discount rate as for the forecast period.³³

<p>Equation 3: $\text{Residual value} = \frac{\text{Cash flow in year after end of forecast period}}{\text{Discount rate} - \text{growth rate}}$</p>
--

If cash flows are assumed to grow at a constant rate for perpetuity, Equation 3 could be used on its own, without the cash flows for initial years calculated individually. Clearly this would not be as accurate as the normal DCF method (one of DCFs advantages is the ability to individually assess future cash flows), but it could provide a simple alternative which might be appropriate in certain instances. This option has rarely been considered in the literature.

c. Estimating the Discount Rate

A crucial, and judgmental aspect of using DCF analysis is the need to estimate the discount rate. One of the most important issues is the extent to which the discount rate should incorporate risk. It is generally accepted by finance theorists, that rational investors will require superior returns from high risk investments than those with a low

³² This is also termed salvage value or terminal value.

³³ Other options are available for the estimation of the residual value. Glover (1987, p.38) suggests the traditional valuation techniques (discussed later in this Chapter) of capitalised maintainable earnings, liquidation value, or book value could be used.

risk. Gilt-edged securities (for example, Government bonds) will have lower discount rates than those used to value a company. Brown (1991) criticises the Australian Courts for not always accepting this, for example, Straughton J. states in *Buckingham v Francis*³⁴ that:

... I do not know why he says with such confidence ('clearly') that a purchaser would not accept a lesser yield when buying a private company than he could obtain in a gilt-edged market ...

However, Brown (1991) does not consider the possibility that investors may not be rational in the traditional finance sense. Surprisingly, this issue is rarely discussed in valuation articles or texts. Flavel (1990, p.7) suggests some reasons why investors may choose to purchase a business, other than for financial gain:

- I. to be their own boss;
- II. to work shorter or non-regular hours;
- III. to achieve personal satisfaction;
- IV. to satisfy a hobby motive;
- V. to be gainfully employed;
- VI. to employ family members within a family business.

Nevertheless, these motivations are not enough to justify the work associated with running a business. Ultimately, it is unlikely a business will succeed if it does not generate a sufficient return for the risk involved: (Flavel, 1990, p.7,17)

... these non-profit motives are unsustainable under the pressure of long hours and stress. Eventually enthusiasm wanes and the business falls or is sold ...

Return for risk is the only rational basis for making an investment decision, even though proposed purchaser's may acquire a business for other than financial reasons ...

³⁴ [1986] 2 All ER 742.

The question arises as to how risk should be assessed. A distinction can be seen between the asset models (capital market theory, outlined later in this Chapter) developed by finance theory, and the practical literature that suggests factors to consider and weight when estimating risk and cash flows. Research into the importance of valuation factors is discussed in Chapter 4.

d. Evaluation of Discounted Cash Flow Analysis

DCF analysis has a number of advantages over the traditional valuation techniques that have been used to value unlisted companies (these techniques are discussed in more detail later in this Chapter). These advantages include:

- I. *Inputs clearly defined:* The inputs into a DCF valuation are well defined. Over a given time period, cash flows will represent the benefits accruing to the investor. The discount rate will be the required rate of return for the level of risk in the cash flows.
- II. *Utilises cash flows:* Economic reality dictates that investors assess returns and company values in terms of cash flows, not accounting measures (Brown, 1991). Arbitrary accounting concepts, such as depreciation, should have no affect on the value of company, with the exception of their impact on taxation (a cash outflow). Only in the long term are cash flows reconcilable with profits: (Gregory and Hicks, 1995, p.64)

Although over the life of the company, the sum of the net cash flows must equal the sum of the accounting profits, on a year by year basis, the two can be radically different . . . in essence, accounting profits smooth lumpy cash flows over time. However, the cost of money relates to cash flows, not profit flows.

- III. *Required return explicitly stated:* The required rate of return (discount rate) for a given level of risk in a company will be explicitly stated. This ensures the possibility that returns may not be eventuate will have been considered (Brown, 1991).
- IV. *Assumptions made visible:* Under DCF analysis, the assumptions that have been imputed into the model, will need to be made clear. For example, Hubbard (1990, pp.36-37) suggests these should include: inflation levels, sales growth rates, market growth or market share, future investment required (including working capital), tax rates, exchange rates, period of analysis, residual value, and existing debt.
- V. *Encourages detailed analysis:* Because the assessment of the future cash flows will need to be justified, valuers are encouraged to analyse the company to be valued in detail. Unlike many of the traditional valuation

techniques (that are discussed later in this Chapter): “*Discounted cash flow analysis makes specific allowance for market factors assumed to be implied in capitalising profits or dividends . . .*” (Brown, 1991, p.9).

Some of the criticisms that have been levelled at DCF analysis are:

- I. *The difficulty in estimating cash flows:* Glover (1987, p.38) presents the traditional view that estimating cash flows is often not practical:

. . . a DCF valuation is a major exercise in which company management must participate. Estimates will need to be prepared on sales volume and sales prices, raw materials cost, operating expenses and a host of other material. All these variables will then have to be co-ordinated into pro-forma profit and loss accounts, and balance sheets to support the cash flow figures.

However, the argument that cash flows are more difficult to estimate than profits (a common input in traditional valuation methods) is questionable. Glover (1987) does not explain why it is necessary to go through a laborious process to estimate cash flows, but not to estimate profits. Sales volume, raw materials cost etc., will affect any profit estimate in much the same way as it will affect cash flows.

Additionally, previous cash flow data is readily available (or easily calculated), allowing a simple (limited) valuation to be undertaken.³⁵ If anything, the fact that DCF analysis encourages more detailed analysis of companies by valuation experts, is an advantage.

- II. *The Courts prefer methods based on actual rather than forecasted figures:* The literature suggests that the Courts prefer methods based on actual figures (for example, Blair (1990)). However, Brown (1991, p.18) explains why this is not a problem for DCF analysis:

Courts prefer to rely on methods of valuation which take account of actual rather than forecasted figures. This preference however, does not render discounted cash flow analysis useless. Discounted cash flow analysis relies upon the past to predict the future. Projected figures must be based upon actual figures where possible rather than mere speculation.

- III. *The discount rate is the purchasers discount rate:* Theoretically, the discount rates of prospective purchasers may differ because of differences in their portfolios.³⁶ This is described by Glover (1987, p.38):

³⁵ Using, for example, regression analysis, or by simply averaging, which is the process often advocated for the traditional technique of capitalised maintainable earnings discussed later in this Chapter.

³⁶ This is discussed in the Section on portfolio theory later in this Chapter.

The DCF basis of valuation will not necessarily produce a market valuation. Because the discount rate is the buyer's required rate of return and not necessarily the market rate of return, the resultant figure will be the value to the particular buyer. It indicates the maximum he should accept. The actual price realised will depend on the circumstances of the buyer, i.e. on the buyers owner value, and on the bargaining and negotiation skills of the two sides.

However, different investors will always be prepared to pay different prices on the basis of their intentions for an assets use. Valuers using the DCF method will need to consider these intentions when arriving at an appropriate discount rate that reflects market rates of return for the company given its level of risk.

- IV. *The resulting valuation is too variable:* One criticism of the DCF method has been that small changes in the inputs can result in large changes in the valuation obtained. However, this is tempered by the fact that the same problems will occur when using most traditional methods. Hubbard (1990, p.36) discusses an example of the irrationality of this criticism with reference to valuing takeover targets in Australia:

... Ironically, while most experts are unwilling to use this method [DCF] in their reports on industrial targets, because it is considered to be too uncertain and results in a wide range of valuations, it is the accepted method in valuing mining companies. Yet the values of mining companies fluctuate in a much wider range than the values of mature industrial companies because mining products are subject to world market supply and demand problems as well as exchange rate fluctuations.

- V. *The resulting valuation is too precise:* Another criticism, is that for given inputs, the valuation obtained will be very precise in nature. This can be seen as obscuring the judgmental nature of the inputs into the valuation. Clearly, because of the lack of an efficient market, no unlisted valuation method can provide a precise assessment of the value of a company. This is a criticism of all valuation methods, not solely DCF analysis. Caution needs to be taken to ensure that a DCF analysis is not presented as the precise theoretically correct value of an unlisted company. It will simply provide the correct valuation given the inputs estimated.

The argument that the DCF method is not understood sufficiently in New Zealand to enable a justification of its use is dubious, given anecdotal evidence that DCF analysis is accepted for major listed valuations: (Williams, 1995, p.25)³⁷

³⁷ This example concerns an attempted management buyout of Skellerup Group on December 20, 1995.

In his report, Jordan Sandman Were's Mr Goatley said the company's value ranged from 240c a share based on discounted cashflow to a breakup value of 255c a share.

Ultimately, DCF analysis appears an excellent method by which to value unlisted companies. Not only is it intuitively sensible (simply the present value of the benefits accruing to the purchaser from an investment), but it is also theoretically strong (although, as has been shown, it is not a perfect method).

II. Capital Market Theory

Finance theory has developed two asset pricing models which some authors recommend as relevant to the valuation of unlisted companies.³⁸ These are, the capital asset pricing model (CAPM), which derives from portfolio theory, and the arbitrage pricing theory (APT). Both of these models can be used as methods to assess the discount rate for a DCF analysis. These models are often included under the finance classification of capital market theory.

a. Portfolio Theory

In order to explain the CAPM, it is first necessary to describe portfolio theory, from which the CAPM derives. Markowitz (1952, 1959) developed the basic portfolio model from the foundation of a number of assumptions: (Reilly, 1989, p.257):

- I. Investors consider each investment alternative as being represented by a probability distribution of expected returns over some holding period.
- II. Investors maximise one-period expected utility, and their utility curves demonstrate diminishing marginal utility of wealth.
- III. Investors estimate risk on the basis of the variability of expected returns.
- IV. Investors base decisions solely on expected return and risk, so their utility curves are a function of expected return and variance (or standard deviation) of returns only.

³⁸ For example, Blair (1990), Keane (1992), and Lonergan (1993).

- V. For a given level of risk, investors prefer higher returns to lower returns. Similarly, for a given level of expected return, investors prefer less risk to more risk.

From here, Markowitz illustrated that the variance of expected returns is a meaningful measure of risk. The expected return of a portfolio will be the weighted average expected return of the individual assets in the portfolio (Equation 4).

$$\text{Equation 4: } E(R_{\text{port}}) = \sum_{i=1}^n W_i R_i$$

Key: $E(R_{\text{port}})$ = expected return of the portfolio

W_i = the percent return of the portfolio in asset i

R_i = the expected rate of return of asset i

The standard deviation of the portfolio will be the a function of both the individual assets in the portfolio, and the covariance between all the pairs of assets in the portfolio (Equation 5). Therefore, in measuring the risk of a portfolio, the way assets relate to each other is as important as their individual risks.

$$\text{Equation 5: } \sigma_{\text{port}} = \sqrt{\sum_{i=1}^N W_i^2 \sigma_i^2 + \sum_{i=1}^N \sum_{\substack{j=1 \\ i \neq j}}^N W_i W_j \text{Cov}_{ij}}$$

Key: σ_{port} = standard deviation of the portfolio

W_i = weights of individual assets in portfolio

σ_i^2 = the variance of asset i

Cov_{ij} = the covariance between returns of assets i and j

The risk of a portfolio can be divided into two key components, systematic risk (undiversifiable) and unsystematic risk (diversifiable). Systematic risk is the risk which cannot be diversified away or reduced. Unsystematic risk can be reduced through diversification. A portfolio which maximises the return for a given level of risk, is said to be Markowitz efficient, and lies on the efficient frontier.

Therefore, when assessing risk, it is important for investors to consider the interaction of a potential investment with their current portfolio. This understanding is useful, and may affect the value of the company for a potential purchaser. However, the

extension of the theory to cover all purchasers (who will each have different portfolios) is more questionable. This extension has been attempted through the CAPM.

b. Capital Asset Pricing Model

The CAPM extends portfolio theory to indicate the required rate of return for all assets. The CAPM has been credited to three researchers, Sharpe (1964), Lintner (1965) and Mossin (1966). The following expanded assumptions from portfolio theory are used: (Reilly, 1989)

- I. All investors are Markowitz efficient investors who want to be somewhere on the efficient frontier.
- II. It is possible for investors to borrow or lend any amount of money at the risk-free rate of return (RFR).
- III. All investors have homogeneous expectations.
- IV. All investors have the same one-period time horizon.
- V. All investors are infinitely divisible.
- VI. There are no taxes or transaction costs involved in buying or selling assets.
- VII. There is no inflation or change in interest rates, or inflation is fully anticipated.
- VIII. Capital markets are in equilibrium.

Although many of these assumptions are unrealistic, further research has relaxed them. Three concepts are important for the CAPM, the existence of a risk free rate of return (RFR), a market portfolio rate of return (R_m), and a standardised measure of risk, beta (β).

The risk free rate of return is the return generated from investing in a risk free asset. With such an asset there is no uncertainty (risk) in its return; the standard deviation will be zero. Normally, Government bonds are used to approximate this asset.

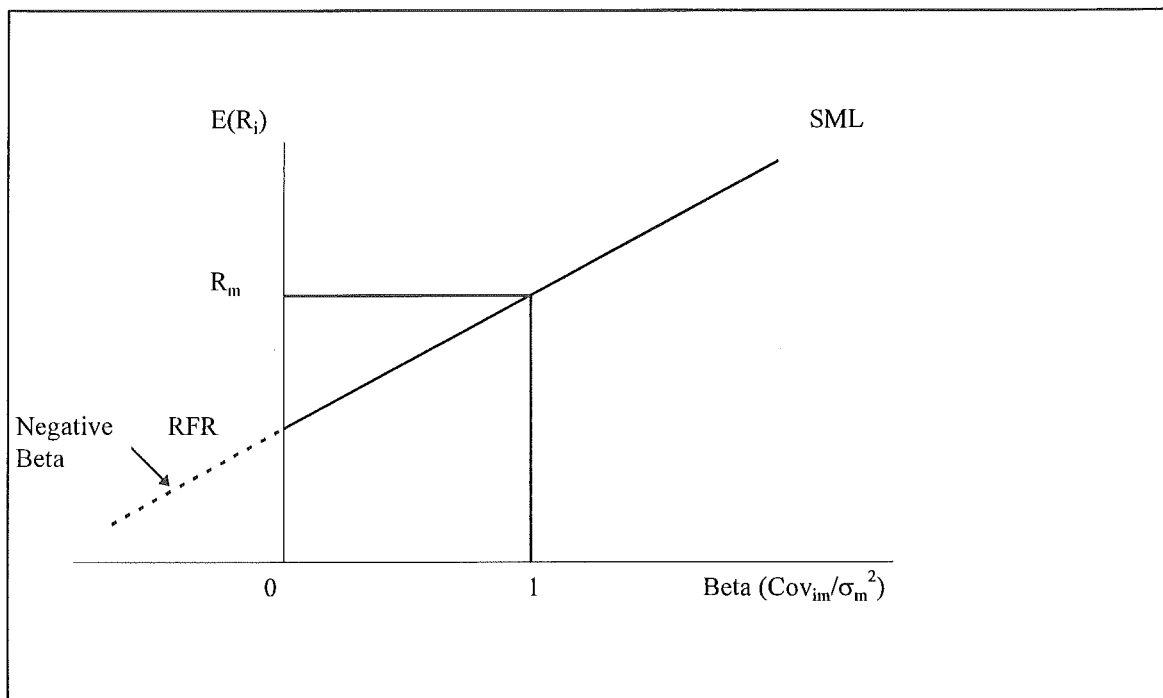
The market portfolio is the portfolio of assets which gives the highest possible return. In theory it will include all assets in the economy, as there would be no demand for an asset not in the portfolio. All assets will be included in proportion to their market

value, as the market is in equilibrium. Because all assets are included in this portfolio, it will have no unsystematic risk (diversifiable risk).

Beta is the standardised measure of the systematic risk (undiversifiable risk) of an individual asset. An asset with a beta of 1, will have the same return as the market portfolio. A beta of 2 would indicate that the returns of an asset are twice as risky (variance) as the market portfolio, whereas, a beta of 0.5 would indicate the return of an asset is half as risky as the market portfolio.

The security market line (SML) illustrates the relationship between expected return and beta under the CAPM. This is displayed in Figure 1. Therefore, the expected return of any asset will equal Equation 6, the RFR plus a risk premium $\beta(R_m - \text{RFR})$. Under the CAPM, this is the discount rate (expected return) by which to value an asset.

Figure 1: Graph of SML with Normalised Systematic Risk (Reilly, 1989, p.292)



$$\text{Equation 6: } E(R_i) = \text{RFR} + \beta_i (R_m - \text{RFR})$$

Key: $E(R_i)$ = expected return asset i, RFR = risk free rate of return,
 R_m = market rate of return, β_i = beta of asset i

The CAPM has been extensively tested since its inception. Similarities exist with the research which has investigated the EMH. The CAPM also found early

empirical support, but has since been challenged on a number of grounds.³⁹ A major criticism of the CAPM is its statement that risk can be accounted for by only one variable, beta (β). Many researchers (for example, Roll and Ross (1980)) consider this to be overly simplistic, that it is unrealistic to believe β can incorporate all factors (for example, industry data, economic data, etc.). The Arbitrage Pricing Theory (APT) is an alternative asset pricing model with attempts to overcome this problem (discussed later in this Chapter).

Some have argued that the use of the CAPM, in conjunction with DCF analysis, is crucial to modern business valuation. Keane (1992, p.1) quotes from The Institute of Chartered Accountants of Scotland (ICAS) topic series on the valuation of shares and businesses:

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 . . . Any valuation method is suspect, therefore, which departs significantly from the principles of the present value model and from capital asset pricing theory.

However, aside from the theoretical problems, there are serious practical difficulties when using the CAPM. One of these practical problems is the need to assess the inputs into the CAPM. In particular, it is very difficult to estimate the return of the market portfolio, R_m , risk free rate, RFR, and beta, β . Harrington (1987, Chapters 4, 5, and 6) provides a good description of the process for listed securities.

Recognising the difficulty of estimating inputs into the CAPM in heavily traded markets, the CAPMs suitability for unlisted shares is very questionable. The use of a share market index as the basis of the market portfolio would be contentious, as unlisted shares have different characteristics to heavily traded shares (in particular, marketability). Additionally, the assessment of beta will be a judgment call, as frequent information on the market price (and hence, return) of unlisted shares will not be available.

³⁹ See, for example, Roll and Ross (1980), Harrington (1987), Wheatley (1988), Chan and Chen (1991), Chan, Hamao, and Lakonishok (1991), Fama and French (1992), and The Economist (1995).

For unlisted company valuation, there is little reason to believe that the derivation of three factors (β , RFR, and R_m) will be superior to estimating the discount rate directly. Parallels exist with a statement by Gruenwald (1961, p.32) concerning the choice of two valuation approaches:

No more is known when estimating the one rate to be used as an overall rate of capitalisation than is the two rates . . . It seems somewhat presumptuous to suggest that more accurate results can be obtained through the use of dual rates of capitalisation than by employing one overall rate.

Unlike DCF analysis, the CAPM does not appear to be a suitable method for the valuation of unlisted companies. This is because the CAPM is both theoretically suspect, and impractical for unlisted companies.

c. Arbitrage Pricing Theory

The Arbitrage Pricing Theory (APT) was devised by Ross (1976, 1977). Unlike the CAPM, the APT utilises a set of factors which price risk. It builds upon three of the assumptions of Portfolio Theory and the CAPM:

- I. It is possible for investors to borrow or lend any amount of money at the risk-free rate of return (RFR).
- II. For a given level of risk, investors prefer higher returns to lower returns. Similarly, for a given level of expected return, investors prefer less risk to more risk.
- III. There are no taxes or transaction costs involved in buying or selling assets.

Additionally, the APT requires that: (Harrington, 1987, p.193)

- IV. Investors agree on the number and identity of factors that are important systematically in pricing assets.
- V. There are no riskless arbitrage profit opportunities.

The basic formula is presented in Equation 7. The expected return (risk) of an asset will be determined by its relation to key factors, which systematically affect all assets in the economy. The theory holds that in an efficient market, arbitrage by investors seeking short term gains will ensure that all assets are priced in accordance with the APT.

$$\text{Equation 7: } E(R_j) = R_f + \beta_{j1}(E(RF_1) - R_f) + \dots + \beta_{jk}(E(RF_k) - R_f)$$

Key: R_i = the return on an asset, R_f = risk free rate of return, E = an expected variable
 RF_k = expected return on a portfolio with an average covariance (1.0) to a factor k ,
 that systematically affects returns, a factor common to all assets returns,
 β_i = the covariance of an asset with a factor, j = an asset, k = a factor

Like the CAPM and EMH, early empirical support was found for the APT but it has since been challenged on a number of grounds.⁴⁰ Perhaps the most significant problem, is the differences in opinion concerning the factors by which all assets are priced, and how these factors should be found.⁴¹ Additionally, the APT suffers from a “joint hypothesis” problem. Empirical deficiencies in the theory may be a result either of failings in the APT itself, or markets not efficiently allowing arbitrage to value assets accurately.

Generally, the APT has proved to be more accurate than the CAPM, indicating that risk cannot be measured accurately by only one factor (beta). However, its practical relevance to unlisted company valuation must be questioned, given that no set model has been (or possibly can be) derived. Additionally, there are significant problems in obtaining reliable information on unlisted companies. Chapter 4 discusses empirical North American research which has investigated the importance of various factors, and tried to develop formulas by which unlisted companies can be valued. The APT could possibly be used to extend and justify such research, however, the APT has not been used in this way.

C. Traditional Valuation Theory

Traditional valuation techniques for unlisted companies are often advocated in the practical literature. Many of them, including capitalised maintainable earnings, and

⁴⁰ See for example, Shanken (1982), Lehmann and Modest (1988), Poon and Taylor (1991), Coonor and Korajczk (1993), and Mei (1993).

⁴¹ For example, factor analysis is one of the most popular methods, but this has been challenged by Shanken (1982).

the use of price earnings ratios, have their origins in finance theory. The asset approaches that are advocated, can be viewed as having derived more from economics.

I. Capitalised Maintainable Earnings

One of the most popular and widely used methods by which to value unlisted companies is capitalised maintainable earnings (CME).⁴² Two basic models exist, the straight capitalisation method, and the composite capitalisation method (Gruenwald, 1961). In New Zealand, the literature normally uses the straight capitalisation method, as per Equation 8 (earnings in Equation 8 equate with profits). The value of a firm will simply be the estimated maintainable earnings after tax divided by a capitalisation rate.

$$\text{Equation 8: } V = \frac{\text{E.M.E.A.T.}}{r}$$

Key: V = value of firm, E.M.E.A.T. = estimated maintainable earnings after tax,
r = capitalisation rate

The composite method to capitalise profits is uncommon, and relies on the premise that the earnings of tangible assets require a different capitalisation rate than the earnings from intangible (goodwill) assets.⁴³ Gruenwald (1961, p.32) dismisses this method as having little value:

No more is known when estimating the one rate to be used as an overall rate of capitalisation than is the two rates . . . It seems somewhat presumptuous to suggest that more accurate results can be obtained through the use of dual rates of capitalisation than by employing one overall rate.

a. Estimating Maintainable Earnings

The first step in calculating CME (under the straight capitalisation model) is to calculate the maintainable earnings after tax. Unfortunately, it is difficult to find a clear

⁴² CME is also known as future maintainable profits (FMP), future maintainable earnings (FME) and capitalised maintainable profits (CMP).

⁴³ Effectively the same method can be seen later in this Chapter in the Goodwill Super-Profits section.

definition of what maintainable earnings are. However, what is accepted, is that maintainable earnings are based on the profits of the company.

Normally, strong weight is given to previous years profits: (Speedy, 1967, p.162)

The accounts of the business should be examined for about three to five years and preferably longer to ascertain the trend and sustainability of profits.

After eliminating unusual and non-recurring items, some authors advocate a consideration should be given to future performance: (Speedy, 1967, p.164)

Although some older text books suggest that profits should be averaged over a period of say up to five years, in modern economic and business conditions, averaging without considering the current position and estimating the future maintainable profits is hardly any better than adopting a rule of thumb method.

Another who shares this view, is Wright (1972, p.20) who states that:

... it must be stressed that values are future oriented, and that historic [sic] results should only be used as a guide to the future. Thus, in determining what level of earnings are most important for capitalization purposes historic [sic] earnings levels must be carefully reviewed for inconsistencies and inequities.

Adamson (1986) holds an alternative view to Speedy (1967) and Wright (1972). He believes that maintainable profits should represent the current earning capacity rather than future earning capacity. Adamson (1986, p.104) attempts to justify his reasoning:

Current maintainable profits are those arising during the financial period which contains the date of the valuation, at which time there could be evidence of a growth or recession in turnover or profit as compared with earlier periods. It is true that growth or recession may be part of a sustained trend over a period of years, and may be expected to continue for some years. It is submitted, however, that in the ascertaining of maintainable profits no allowance should be made for such a trend beyond the point it has reached at the relevant date. After that date its continuance is not an accomplished fact . . .

A New Zealand author, Blair (1990, p.28) supports this approach on the grounds that the Courts have shown a preference for it:

... decided cases confirm that valuers who use a basis of maintainable profits other than established earnings leave themselves open to legal criticism unless the future projections are very soundly based and supported by those with expertise in the industry.

As a guide to the estimation of maintainable earnings, Adamson (1986) suggests that past earnings over a suitable period should be averaged. Where this is done, exceptional years should be excluded. Adamson (1986, p.105) quotes an early New Zealand Court case, *Commissioner of Stamp Duties v Haynes*⁴⁴, which took this approach: “... in attempting to ascertain ... normal earning capacity ... results of an exceptionally bad year cannot fairly be taken into account”.

Adamson (1986, p.107) does accept that there may be situations where past earnings are not suitable to estimate maintainable earnings from. These occur where there are:

- I. differing amounts of capital employed over the period of examination;
- II. inclusion of income from funds not required for maintenance of normal profits;
- III. change in management;
- IV. the case of a new business which had not reached full production capacity;
- V. some vital change or anticipated change affecting the profits since the last balance date.

The debate over whether to include future trends in the maintainable earnings is an illustration of one of the problems with the CME method. The input of maintainable earnings, is given different meanings by different authors.⁴⁵ Even where an author (for example Adamson (1986)) has attempted to provide a clear method for calculating maintainable earnings, using only past and current data, he has given a number of exceptions where future trends should be considered.

⁴⁴ [1924] NZLR 337.

⁴⁵ By contrast, there is very little debate as to the meaning of future cash flows in a DCF analysis.

b. Estimating the Capitalisation Rate

The second step under the CME method is to determine the capitalisation rate. Speedy (1967) considers this the most difficult aspect of using the CME method. He suggests 15 factors which should be considered when assessing this rate (Speedy, 1967, p.165). Adamson (1986, p.104), who excludes future trends when calculating the maintainable earnings, does allow for them in the assessment of the capitalisation rate:

... The settling of this percentage is one phase of valuation where conjecture must necessarily play some part and where the opinions of valuers could differ considerably ...

It is becoming more common, for it to be argued that the capitalisation rate under CME equals a discount rate (like that for DCF analysis), less the firms growth rate.⁴⁶ This can be seen as a modern means of reconciling CME with DCF analysis, as this idea is not present in the traditional literature that has supported the CME method (for example, Adamson (1986), Speedy (1967) and Wright (1972)).

c. Treatment of Surplus Capital

Surplus capital is the presence of assets over and above those considered necessary for maintaining the company as a going-concern. Adamson (1986, pp.144-146) describes how surplus capital can arise:

- I. if more capital than is required was invested originally or added from time to time;
- II. the sale of a branch or portion of the enterprise, and the proceeds either retained in the business or invested in outside securities;
- III. provision of certain contingencies which did not eventuate;
- IV. creation of reserves to an extent greater than is necessary for stability and normal progress;
- V. realisation of assets at a substantial surplus over their cost, with no likelihood of such surplus being needed to pay for replacements.

⁴⁶ For example, Hagen (1987) and Keane (1992).

The treatment of surplus assets is a matter of debate. One approach is to view them no differently from other assets in the firm; with their impact on risk and return imputed into the CME assessment. Alternatively, it can be assumed that they will be realised for the benefit of the purchaser on acquisition, and hence, their value should be added to the CME value of the company without the surplus assets. Adamson (1987, p.146) states when he feels they should be treated separately:

... The justification for separate treatment is whether the assets are detachable from those required as working capital and whether they are of material value and can be distributed to the proprietors.

d. Evaluation of Capitalised Maintainable Earnings

For many, capitalised maintainable earnings is not intuitive. The very premise of there existing “maintainable” earnings is questionable because firms operate in an unstable environment. The maintenance of a set level of earnings will not necessarily be possible, or desirable, in a world of rapidly changing technology, where opportunities for further growth may occur: (Gregory & Hicks, 1995, p.65)

... in a typically encountered situation of profits growth and inflation, the concept of “maintainable profits” is rather meaningless ... This difficulty is avoided in the discounted cash flow valuation model as future cash flows (including growth and inflation elements) are explicitly forecast.

Perhaps because the CME method cannot be easily justified in its own right, it is sometimes argued in the literature that when implemented correctly, the CME method (and other traditional valuation techniques) will equate to a DCF analysis: (Hagen, 1987, p.7)

Much accounting based valuation literature tries to compare the traditional methods with discounted cashflow (DCF) as if it was “something different”. It isn’t.

Hagen (1987, pp.7-12) shows algebraically that CMEs is reconcilable with DCF analysis. However, Hagen’s (1987) reasoning requires four assumptions:

- I. *Cash flows equate to dividends and retained earnings:* This is contentious. Cash flows (benefits) accruing to the investor can be viewed as dividends plus any capital gain on the shares. But the capital gain will relate to the

cash flows retained in the business, which will not necessarily equal retained earnings. This is because retained earnings is a profit based figure, it is affected by non cash items, for example, depreciation.

- II. *There exists a constant growth rate, g :* One of the advantages of DCF analysis is that future cash flows can be estimated individually. Only if it is assumed that the firm grows at a constant rate can the two methods (DCF and CME) be reconciled.
- III. *Maintainable earnings are next years earnings:* In illustrating how CME and DCF reconcile, Hagen (1987) uses next years earnings instead of maintainable earnings. Rarely in the literature is maintainable earnings described as next years earnings. Given that maintainable earnings will be a constant figure to be maintained into the future, on the surface it is logical that next years earnings will be at the maintainable level.
- IV. *The firms retained earnings are reinvested at a rate which equals the investors discount rate, $s = r$:* Hagen (1987, pp.10-11) recognises that without such an assumption, this years earnings which are reinvested will be double counted under the CME formula. He presents a more “correct” method, which differs from the CME model.

If CME is viewed as deriving from DCF analysis, then when it is used, the above assumptions should be made explicit (with the possible exception of Item III). However, these assumptions are not made clear in the literature, so it is unreasonable to expect practitioners to do so. It is difficult for the writer to escape the conclusion that the CME method did not derive from DCF analysis, and is not reconcilable with it. It is interesting to compare the advantages that were outlined earlier in this Chapter for DCF analysis with the CME method. This further illustrates the differences between the methods:

- I. *Inputs clearly defined:* As has been shown, the inputs in the CME model are not clearly defined, with authors differing in their interpretation of the obscure concept of maintainable earnings.
- II. *Utilises cash flows:* CMEs uses profits rather than cash flows (discussed previously).
- III. *Required return explicitly stated:* The basic CME model uses a capitalisation rate, rather than a required rate of return. (Although, a required rate of return and growth rate can optionally be stated by the valuer with the CME method).
- IV. *Assumptions made visible:* Because maintainable earnings is often based on past data, any assumptions made may not need to be highlighted to the same

extent as when estimating future cash flows. This is deceptive, because growth prospects and other factors will still need to be implied through the capitalisation rate. Brown (1991, p.18) states that:

The seemingly greater objectivity of conventional capitalisation of earnings methods is more apparent than real. As seen, the conventional capitalisation of earnings methods subsume such issues as gearing, management costs, acquisition costs, capital gains, tax effects, and income growth; whereas this is not true in the case of discounted cash flow analysis whose methodology requires each to be specifically considered and a determination made by the valuer using his experience and value judgment. Moreover, by making the otherwise implicit explicit, errors in judgment are more easily noticed and corrected.

- V. *Encourages detailed analysis:* The use of traditional profit data, is less likely to encourage a detailed analysis than the estimation of future cash flows. This is because previous profit figures will often simply be averaged, with the capitalisation rate accepted as a judgmental assessment.

Capitalised maintainable earnings does not appear to be a suitable method for the valuation of unlisted companies. It is theoretically flawed, and relies on a concept (maintainable earnings) that is not intuitive for many. DCF analysis has been shown to be a superior method, whereby any assumptions imputed will need to be clearly stated.

II. Comparable Company Approaches

Two indirect earnings based valuation methods will be discussed, price earnings ratios (PER), and free cash flow multiples (FCF). Unlike the more direct earnings methods of valuation,⁴⁷ discount and growth rates do not have to be calculated (Keane, 1992). Instead, these methods rely on the premise that comparable companies can be used to ascertain an appropriate value for a firm.

a. Price Earnings Ratios

Price earnings ratios (PER) are sometimes used to value companies. Keane (1992, p.7) described the process, which is displayed in Equation 9:

⁴⁷ For example, DCF analysis and the CME method.

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.

$$\text{Equation 9: } V = \frac{P}{E} \times E_u$$

Key: V = value of unlisted firm, P/E = price earnings ratio of comparable company/s
 E_u = earnings of unlisted firm

It is interesting to compare PERs with the CME method. It can be argued that the PER from a comparable company will equal the reciprocal of the capitalisation rate. This reasoning is displayed arithmetically in Equation 10, which equates Equation 9 with Equation 8.

$$\text{Equation 10: 1) } \frac{P}{E} \times E_u = \frac{\text{E.M.E.A.T.}}{r}$$

$$2) \quad \frac{P}{E} \times E_u = \text{E.M.E.A.T.} \times \frac{1}{r}$$

$$3) \quad \frac{P}{E} = \frac{1}{r}$$

Step 3 in Equation 10 assumes that the earnings by which the PER is multiplied, equals the estimated maintainable earnings after tax (E.M.E.A.T) used under the CME method. However, although these two methods are arithmetically reconcilable under this assumption, unlike PERs, the literature treats the CME method as a direct approach to valuation, whereby the capitalisation rate and maintainable earnings are estimated with reference to a number of factors. Therefore, these two methods are clearly different.⁴⁸

The theoretical validity of the PER method (as described by Keane (1992)) depends upon three assumptions, that:

- I. the listed market is efficient (Keane, 1992);

⁴⁸ The next Chapter discusses the confusion Keane (1992) has found amongst practitioners, who often mixed the PER and CME methods inappropriately.

- II. the listed market prices shares on the basis of PERs; and
- III. the unlisted market for shares is closely related to the listed market.

All three of these assumptions are questionable. The first assumption, is discussed in Appendix 1. There is growing evidence that the listed market is not efficient. The second assumption, is also debatable. Theorists have been trying unsuccessfully to devise an accurate asset pricing model for the listed sharemarket throughout the twentieth century.⁴⁹ Although considered a useful tool, PERs are not the only factors by which shares are priced on listed markets.⁵⁰ However, Arnold and Moizer (1984) provide evidence that equity analysts in the United Kingdom use PERs extensively. They quote an analyst who explained why this approach is often preferred to DCF analysis: (Arnold and Moizer, 1984, p.201-202)

DCF although mathematically very appealing is far to precise an estimate of a company's worth, given the inexact nature of investment. More important is the overall view of a share including all factors: earnings, quality of management and products, future outlook and net asset value; information which is gradually gained with experience and somehow distilled, haphazardly if you like, into some kind of P/E ratio, the value [of which] is dependent on one's view about the likely growth of earnings per share. [This value is then] compared with the P/E ratio the market gives [and] the difference between the two, i.e. your idea of what the P/E ratio should be and what the market thinks it should be, is the extent of cheapness or dearness on a long-term view.

This view has been challenged in New Zealand by a financial analyst in a recent newspaper article: (The Independent, 1995, p.17)

P/E is widely used because it is easy to calculate and nearly all investors know what it means. But, despite its ubiquity, P/E has some serious shortcomings. The biggest is that it focuses on net earnings after all charges. Thus it is something of an accounting creation . . .

Rather than look at earnings, and increasing number of professional investors now focus on cash flow as the arbiter of value and pay scant attention to reported earnings . . .

⁴⁹ Two of the more familiar ones, are the CAPM and the APT, which were discussed earlier in this Chapter.

⁵⁰ Glover (1987) quotes from Larcier, in *The Investment Analyst*, September 1977, who found no relationship between PERs and return, or risk.

These investors are far more interested in the amount of cash a business can create rather than the earnings cooked up with the tax position, the debt position and depreciation schedules . . .

After all it is the cash a business can generate which, in the long run, will determine its value.

The third assumption, hinges on similarities between the nature of listed and unlisted shares. Keane (1992) suggested that a discount for marketability should be factored into the PER selected. However, the price of such a discount is difficult to determine, and highly arbitrary. Research in the United States of America has found that the discount between listed and unlisted shares can cover a wide range: (Wise, 1989, p.71)

The difference between such shares and unrestricted publicly listed shares is the lack of marketability . . . these studies show that discounts of 35%-50% can be applied to arrive at a fair market value.

Although the PER of a comparable company may be a useful factor to consider when valuing unlisted companies, it should not be used as the sole method of valuation due to the lack of an efficient market with adequate comparable companies.

b. Free Cash Flows Multiplier

An indirect alternative to DCF analysis, is through the use of a free cash flows (FCF) multiplier. FCFs represent the cash flows available for new investments. Pratt (1993, p.13) shows how to calculate net free cash flow, as per Equation 11. FCFs incorporate interest, and adjust for changes in long term debt.

Equation 11:

Net income (after taxes)

add: noncash charges

less: capital expenditures (net changes in fixed and other noncurrent assets)

less: changes in working capital

plus: net changes in long-term debt

equals: Net free cash flow

Net free cash flow is then used as the variable discounted, using equity risk premium data, and other data, from *Ibbotson Associates* (Pratt, 1993, p.14).⁵¹ Under the FCF method, the valuation of the firm will be determined by a cash flow multiplier (Equation 12).

<p>Equation 12: $\text{Value} = \frac{\text{Net free cash flow}}{\text{Discount rate}}$</p>

Loneragan (1993) criticises the difficulty present in assessing “normal” levels of capital expenditure. Additionally, Lonergan (1993) argues that there is little available information on cash flows of comparable companies, particularly in the unlisted market.

Although this method is interesting, and may be viable in the United States of America where there are good sources of information, it does not appear suitable for New Zealand, where there is a dearth of financial and industry data.⁵²

III. Asset Approaches

There are a number of asset approaches that have been used for the valuation of unlisted companies. Five key methods which are commonly considered in the literature and by the Courts will be discussed (book value, adjusted book value, realisable value, liquidation value, and goodwill). Although other variants exist,⁵³ there is little evidence of their widespread acceptance, or any theoretical superiority.

a. Book Value

Book value is the simplest of the asset approaches. It is calculated as the total assets of the organisation less total liabilities. These figures are taken directly from the firm’s financial statements, which are a very cheap source of information. The problem

⁵¹ Alternatively, the CAPM and APT can be used to calculate the risk premium. If this is done, then FCF becomes a direct method of valuation. However, such an approach is unusual, and appears to offer little to the valuation process.

⁵² The lack of clearly defined industries was discussed in Chapter 2.

⁵³ For example, tangible book value, adjusted tangible book value, and the corporate investment business brokers method.

is that because accounting is based on historical data, the asset values obtained are unlikely to bear much resemblance to their actual worth: (Englebrecht, 1976, p.7)

Since the accounting records are kept on a historical cost basis, there is little reason to expect that book value, except in rare instances, would resemble the current value of securities in the market place.

This is further complicated in New Zealand, as modified historical cost is used. Assets are valued in the financial statements at a mix of values, ranging from net realisable value to historical cost.

b. Adjusted Book Value

Adjusted book value is a common variant on book value. Pratt (1993, p.16) describes the method in three steps:

- I. Adjust all assets and liabilities on the balance sheet from historical cost to current value (usually fair market value on a going-concern basis).
- II. Identify, value, and bring onto the balance sheet all off-balance sheet assets and liabilities (frequently intangible assets which were never recorded on the balance sheet, and contingent liabilities).⁵⁴
- III. Subtract the re-cast liabilities from the re-cast assets.

Step two is particularly important because adjusted book value can bias against firms with intangible assets and contingencies. Hubbard (1991, p.34) discusses a similar approach (of the Australian National Corporate Securities Commission (NCSC))⁵⁵ based on book values:

For service companies, with few tangible assets but possible strong intangibles such as brand names, franchises or distribution outlets, and for mining companies, whose balance sheets are full of capitalised holes-in-the-ground regardless of what is found in the holes, this approach is probably misleading in the extreme. Similar problems exist even for normal manufacturing companies. Hence, the . . . approach should be avoided, unless it is made clear . . . that non-balance sheet assets and liabilities have

⁵⁴ By contrast, Pricer, Vos, and Dixon (1987) remove any intangible assets. No reasoning is given by Pricer, Vos and Dixon (1987) as to why intangibles should be removed.

⁵⁵ NCSC Policy Release 102 and 135.

been actively assessed and that the values in the balance sheet are approximates of market values.

c. Realisable Value

Realisable value is the price obtainable for an asset in the ordinary course of business, less any costs associated with the sale. Three key factors will affect the realisable value of assets: (Gregory and Hicks, 1993)

- I. The timing of the sale (in terms of economic cycle and behaviour of company managers);
- II. The time available to make the sale (distress sales as opposed to non-urgent sales);
- III. The grouping of the assets being sold (for example, a subsidiary can be disposed of as a going-concern or it can be broken up with the assets sold separately).

d. Notional Liquidation Value

Notional liquidation value is a method that attempts to value the firm by calculating the price its assets would obtain in a liquidation, minus any liquidation costs. Notional liquidation is the asset approach recommended by the New Zealand Courts, with the ruling of Cooke J. in *New Zealand Insurance Co Ltd v CIR*⁵⁶ that: “*If an assets-value method is adopted, a notional liquidation is necessarily involved*”.

Pratt (1993, p.16) provides a simple four step description of the liquidation value process:

- I. Determine value in exchange of assets on either orderly liquidation or forced liquidation basis.
- II. Subtract liquidation value of liabilities.
- III. Subtract all costs of liquidation.
- IV. Discount estimated net proceeds to a present value at a rate reflecting the risk of attaining the expected proceeds at the expected time.

⁵⁶ [1956] NZLR 501. This case is discussed in more detail in Chapter 5.

New Zealand Court judgments have approved all of these steps, although a discount reflecting the risks of realisation is only to be included if there is reason to do so (*New Zealand Insurance Co Ltd v CIR*).⁵⁷ Additionally, the New Zealand Courts have specified that a profit to the purchaser can also be deducted from the liquidation value (North J. in *Hatrick*).⁵⁸

I think it must be accepted that in the case of companies with a low earning capacity it is manifest that the fair selling price would be considerably less than the value of the assets less the bare costs of liquidation. If the purpose of the purchaser was to wind up the company then surely he would expect, and have every right to expect, to make some profit on the venture, else why undertake the burden and responsibility at all?

Therefore, the Courts do not view liquidation value as simply the sum of the realisable value of the companies assets less any liquidation costs (which would be the return if the company was liquidated by the current owners). Rather, they consider liquidation value to be the price the company as a whole can be sold for, to a prospective purchaser intending to liquidate the company. This is consistent with the *Hatrick*⁵⁹ test; that the firm should be valued at what, “. . . a willing but not anxious vendor would sell and a willing but not anxious purchaser would buy”.

e. Goodwill

Goodwill is an asset of the company, however, unlike the other assets, it is less easily valued because of its intangible nature. Adamson (1986, p.38) argues that goodwill is a crucial element in the valuation of shares: “*The valuation of company shares and businesses is bound up necessarily with a consideration of goodwill*”. Clearly, it is important to first define precisely what is meant by the term goodwill.⁶⁰

⁵⁷ [1956] NZLR 501. This case is discussed in more detail in Chapter 5.

⁵⁸ *Hatrick v CIR* [1963] NZLR 641. This case is discussed in more detail in Chapter 5.

⁵⁹ *Hatrick v CIR* [1963] NZLR 641.

⁶⁰ Unfortunately, the Institute of Chartered Accountants of New Zealand do not provide a clear definition of goodwill.

Traditionally, goodwill has been defined in terms of the intangible benefits accruing from a businesses reputation. Perhaps the most common definition of goodwill in the literature, is that of Seed (1937, p.8):

Goodwill is the advantage which arises from the good name, reputation and connection of a business; alternatively the benefit which accrues to the owner of a business from the likelihood that such business will earn, in the future, profits in excess of those required to provide an economic rate of remuneration for the capital and labour employed therein.

By contrast, the modern approach, is to describe goodwill as the difference between two values; market price and tangible assets. For example, Speedy (1967, p.158) quotes a definition by Paul:⁶¹

Goodwill may be defined as the premium paid by a person, over and above the value of the asset(s) purchased, for the right to receive the future profits which the relative asset(s) can earn.

Therefore, the inclusion of goodwill in an asset based valuation, results in a going-concern valuation, as the goodwill component will reflect the value of the future benefits available to the purchaser. It follows that if the firm is to be liquidated, goodwill should not be included in the evaluation. This is because the reputation and good name of the company will cease to exist upon liquidation of the firm.⁶² As was discussed in the previous Section, the Courts have ruled that the use of an assets approach necessitates a notional liquidation. On the surface, this would appear to rule out any goodwill based valuation method in the New Zealand Courts (if it is accepted that Goodwill is an assets based approach).

There are two means by which to value goodwill. Either it can be assessed individually, or it can be viewed as simply the difference between a firms market value, and the value of its tangible assets. The goodwill valuation methods described in this Section, are attempts at valuing goodwill directly. This has proven to be a difficult task, with no method clearly superior (Pope, 1995, p.38):

⁶¹ Referenced by Seedy (1967) as from his (T.F. Paul) book, "Advanced Accounting" (p.139).

⁶² The rights to the name of the company could be sold. However, at this point, the name of the company would cease to be goodwill, and instead becomes a tangible asset in the liquidation.

A major difficulty is that no acceptable formula has ever existed for valuing goodwill, and certainly not one which gains approval from both academics and professionals.

Goodwill Super-Profits

Under the super-profits method of calculating goodwill two yields are required. A lower yield, for the normal return of tangible assets, and, a higher yield, for goodwill. This is displayed in Equation 13. In this example, tangible assets have a yield of 10%, but goodwill has a yield of 50% (the same as multiplying super profits by two).⁶³

Equation 13: (Speedy, 1967, p.162)	<i>Example</i>
Estimated Future Maintainable Earnings	7000
less: Allowance for proprietors salary	<u>3000</u>
	4000
less: Allowance for capital employed in the net tangible assets (say) 10% on \$4000	<u>400</u>
Super Profit	3600
Goodwill (say) two years purchase	<u>7200</u>

The use of dual capitalisation rates has been attacked, as was illustrated earlier in this Chapter in the statement by Gruenwald (1961, p.32):

No more is known when estimating the one rate to be used as an overall rate of capitalisation than is the two rates . . . It seems somewhat presumptuous to suggest that more accurate results can be obtained through the use of dual rates of capitalisation than by employing one overall rate.

Livens (1986, p.132) also criticises the use of dual capitalisation rates: “*The yields, one for tangible assets and one for goodwill, at best may be debatable and arbitrary*”. Glover (1987, p.25) also denounces the goodwill super-profits method:

As a technique for valuing a business in its entirety, the super-profits method has a long and ancient pedigree. The advantage claimed for it is that it recognises the transitory nature of above-average performance. However, a little reflection reveals logical inconsistencies in the concept. First, if profits at the economic rate of return are deducted from maintainable

⁶³ This yield explanation is from Speedy (1967). Adamson (1986) describes another super-profits method, that utilises a sliding scale number of years for increasing levels (set at arbitrary levels, for example, \$5000) of goodwill.

profits, any excess must be maintainable super-profits and not transitory super-profits. Second, there is not necessarily any relationship between the balance sheet amount of an asset, whether based on historic [sic] or replacement costs, and its value. The value of assets used in a business are a function of their profit earning capacity and not their costs. Third, goodwill in this scheme of things is a function of the assets. Thus, labour intensive service companies will have lots of goodwill and capital intensive industries, relatively little goodwill. Yet, there is no particular reason why capital intensive industries should have less goodwill than service companies.

There is little to suggest that the concept of super-profits is useful for the valuation of unlisted companies. It can be viewed as an extension of the CME method, yet the use of dual capitalisation rates makes this approach even more arbitrary than CMEs.

Goodwill Rule of Thumb

One of the traditional means by which to value companies, is through the use of a rule of thumb measure to value goodwill. Although on the surface rule of thumb methods have no theoretical basis, in some industries, such rules may have a significant influence on the actions of purchasers and sellers. Speedy (1967) gives the examples of goodwill for milk rounds being calculated on a gallonage basis, bread rounds on the number of loaves, and medical practices on a certain number of months gross fees. Another alternative, is a certain number of years purchase of past net profits (Adamson, 1986). Such methods are clearly arbitrary, and should be treated with caution (Speedy, 1967).

Goodwill in general, appears to have little theoretical value as a concept, outside of a need to balance financial statements. This is because the prospect of valuing the intangible asset goodwill directly, will likely prove more difficult than valuing the firm in its entirety.

f. Appropriateness of Asset Approaches

Opinion differs over when asset based approaches to valuation are appropriate. One view holds that asset methods should only be used when there is no intention to maintain the firm as a going-concern: (Blair, 1990, p.20)

Generally, this method [Asset Value] should only be used in those limited circumstances where not only do the shares being valued carry the power to force liquidation, but the earnings record of the company is so poor that it is obvious that a purchaser of shares would be seriously contemplating liquidation.

This opinion is reflective of the ruling by Cooke J. in *New Zealand Insurance Co Ltd v CIR*⁶⁴ that:

If an assets-value method is adopted, a notional liquidation is necessarily involved. One can, logically, only adopt an asset-value approach if one accepts that the purchaser is buying shares of a company about to be put into liquidation.

However, this view is not universally held. Campbell (1972, p.18) suggests four situations where it might be suitable to value a firm on a liquidation basis:

- I. There is a history of losses and/or little prospect of future profits
- II. There is extreme dependence on key individuals to assure [sic] business continuity, such individuals possessing knowledge or skills that would preclude their replacement.
- III. Industry ease of entry is such that there is little assurance of future profitability over and above a normal return on the liquidation value of the business assets.
- IV. Where value is chiefly a function of assets owned, perhaps due to the difficulty of assessing future profitability (as in the case of land development companies).

On the basis of these criteria, Campbell (1972) gives examples of some firms that would be likely to use liquidation value: small construction and construction-related companies, real estate holding and development companies, and professional specialists' practices.

One industry particularly relevant to New Zealand, is that of farming. Under Campbell's criteria, a farming company may be suitable for valuation on a liquidation basis, even if there is no intention to liquidate. It is relatively easy to enter the farming industry due to an active market for farms (point three of Campbell). Additionally, the

⁶⁴ [1956] NZLR 501.

value of a farming company will often be chiefly a function of the value of the land owned (point four of Campbell). Crimp (1965) arrived at the conclusion that for farming companies asset approaches are suitable:

To summarise, I feel that the "assets" approach, which should give substantially the same result as an earnings approach correctly applied, but which eliminates the making of many assumptions, is a logical one for most farm companies.

The New Zealand Commissioner of Stamp duties, and Registrar of Companies in 1941 (Pearce, 1941a) stated the policy of the Inland Revenue Department concerning which companies should be valued with the assets approach. This policy also appears consistent with Campbell's (1972) criteria: (Pearce, 1941a, p.109)

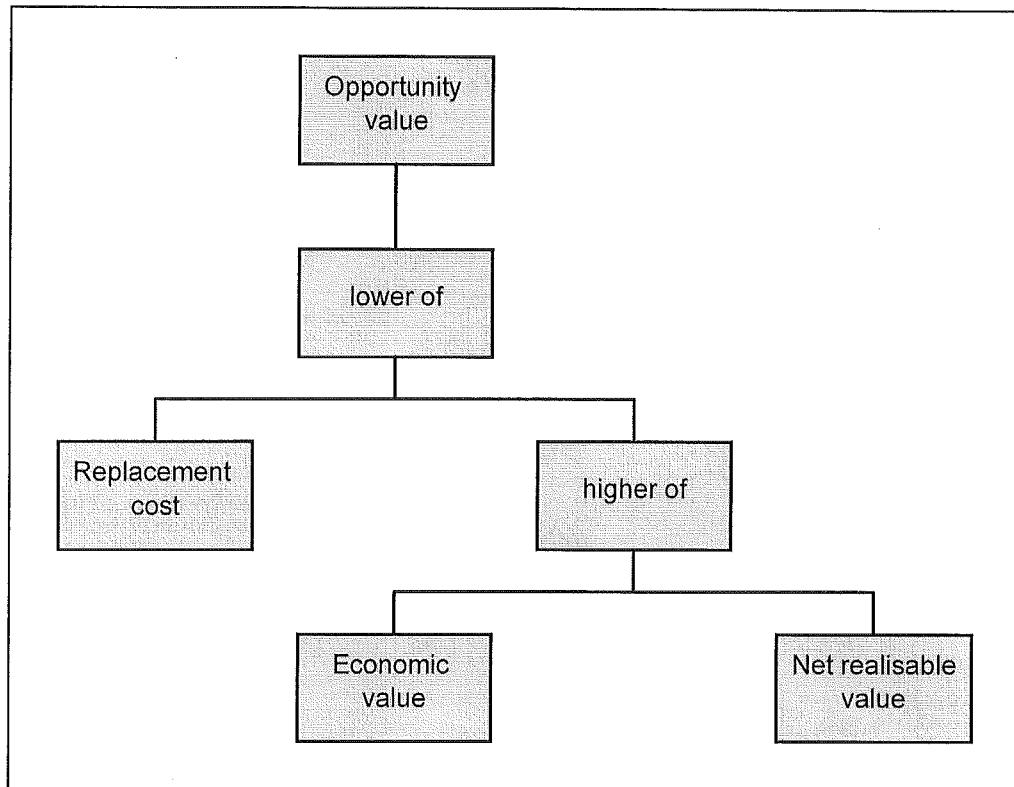
The Assets method of valuation is applied departmentally in the case of new companies, farming companies, family, land and investment companies, small companies that are little different from partnerships except for the legal distinction, and companies in liquidation or about to go into liquidation. There are others.

Gregory and Hicks (1995) show theoretically, that an asset approach to valuation may be appropriate when there is no intention to liquidate the firm. They provide a model, which is displayed in Figure 2. Their reasoning derives from economics. First, they argue that both practice and theory agree the value of a firm is the higher of its going-concern value and its realisable value (Gregory and Hicks, 1995).⁶⁵ Additionally, the higher of the going-concern or realisable value will not exceed the replacement cost of the firms assets,⁶⁶ or a prospective purchaser would be able to do better by simply replicating the firm (Gregory and Hicks, 1995). The value obtained from this model is the firms 'opportunity value'.

Rarely is replacement cost considered relevant in practice or theory. The problem is that replacement cost is almost impossible to calculate, as no firm can be entirely replicated. Consequently, replacement cost is normally assumed to exceed the higher of economic value and net realisable value.

⁶⁵ If the realisable value of the firm exceeds its going-concern value, clearly the firm should be realised.

⁶⁶ This is a broad definition of the term asset, including such things as, brands, personnel, goodwill etc.

Figure 2: Accounting Valuation Principles (Gregory and Hicks, 1995, p.63)

An earlier example of a similar philosophy is provided by Professor Badger, who emphasised the importance of earnings value, with assets value as a last resort, in the preface of his book (quoted from Pearce (1941b, p.19)):

The main thesis adopted is that the exchange value of all capital goods arises out of earning capacity, and that the value of securities, representing in various ways property rights to capital goods, likewise reflects earning power . . . Where no earning capacity, either existing or potential is present, the junk, or liquidation value of the underlying assets, as determined by a physical inventory, will set the lower limits below which the value of securities cannot go.

Although the validity of using the assets approach as the main valuation method will be dependent on the circumstances, there is little argument that the value of assets is often an important factor in valuations. Lonergan (1993, p.20), although also preferring earnings based approaches, recommends the use an asset valuation (realisable value) because:

- I. it assists in the assessment of the security of the earnings to be capitalised;
- II. it enables the value of the goodwill on acquisition to be calculated;

- III. it will influence the choice of an appropriate capitalisation rate. In broad terms, and there may be exceptions, the lower the asset backing the less likely it is that a purchaser will pay a high PER (price earnings ratio);
- IV. the condition of the assets and the adequacy of provisions will directly affect the assessment of FMP (Future Maintainable Profits),⁶⁷ confirming the adequacy of depreciation charges, the doubtful debts provision and the provision for obsolescence; and
- V. it provides a useful cross-check against an earnings based valuation.

IV. Minority Interests

One of the more difficult problems for valuation experts is the valuation of minority interests. The value of a parcel of shares in a company may not equate to the proportionate value of the business. For example, a 10% share-holding in a company may be worth more, or less, than 10% of the total value of the firm. A number of possibilities exist, for example, that:

- I. there should be a discount for a minority interest because of a lack of marketability, and liquidity of the shares (Wise, 1989);
- II. there should be a discount for a minority interest, due to a lack of control over the management of the firm (Wise, 1989);
- III. a particular class of share may deserve a premium or discount because of its attributes;⁶⁸ and,
- IV. there should be a premium for a minority interest, recognising the strategic value of such a parcel of shares, as the removal of a minority shareholder may reduce the running costs of the organisation.⁶⁹

The derivation of such a premium or discount will clearly be a matter of judgment. Any discount or premium will normally be applied to the pro-rata value of the shares. An alternative approach, is to value the parcel of shares separately from the

⁶⁷ It was shown earlier in this Chapter, that DCF analysis is superior to FMP (CME). However, the principle outlined here still applies, with the condition of the assets directly influencing any estimate of future cash flows under a DCF analysis.

⁶⁸ An example of this is *Holt v Holt* [1990] 4 NZFLR 339, which is discussed in Chapter 5

⁶⁹ This recent consideration is illustrated in an Australian case, reviewed by Corrigan (1995).

total firm. One method which is often advocated for this purpose, is the dividend yield model.

a. Dividend Yield

One of the methods developed from finance theory is the Gordon growth model. This model relies on the premise that dividends will grow in perpetuity at a constant rate, and that a firm's value can be explained on the basis of its dividend payments.⁷⁰ The Gordon growth model is displayed in Equation 14, which like Equation 3, deducts a growth factor from the discount rate.

$$\text{Equation 14: } P_0 = \frac{D_1}{k_s - g}$$

key: P_0 = price of a constant growth stock, D_1 = dividend for year one,
 k_s = expected rate of return, g = constant growth rate

Few now consider that the Gordon growth model is an appropriate means by which to value entire companies. The problem with the model is its reliance on dividends, to the exception of cash retained in the business. Miller and Modigliani (1961) showed theoretically, that dividends can be considered irrelevant. Of more importance is the cash generated by the firm. Reinvested cash will increase the value of the company as effectively as dividends will.

However, the Gordon growth model is consistent with DCF analysis, if cash flows are used entirely for dividends (100% dividend payout ratio), and the perpetuity assumption is accepted. Then, the constant growth formula in perpetuity, Equation 3, will equal Equation 14.

The reason the Gordon growth model is advocated for the valuation of minority interests, is that minority shareholders often have limited marketability in their shares, and hence, dividends will be the only benefit they acquire from them. This implies that the value of the shares to the minority shareholder will be totally dependent upon the actions of the controlling shareholder by way of the dividend payout rate they choose to

⁷⁰ See Gordon (1959, 1962, 1963).

set. Clearly, the appropriateness of such an assumption will again depend on the circumstances.

A traditional alternative to the Gordon growth model, is the dividend capitalisation model. This is displayed in Equation 15. Like the CME method described earlier, this model uses the obscure “maintainable” concept. Dividends are capitalised at a dividend yield appropriate for the particular business. There are no apparent benefits to using this model ahead of the Gordon growth model.

$$\text{Equation 15: } V = \frac{\text{EMD}}{d}$$

key: V = value of the firm, EMD = estimated maintainable dividend, d = dividend yield

V. Hybrid Valuation Approaches

Some authors, have advocated the use of a hybrid technique to value companies.⁷¹ This approach, works by giving relative weightings to different valuation methods. For example, liquidation value might be given a weighting of 30%, with capitalised maintainable earnings given a weight of 70%. In this instance, the firm will be valued at 30% of the liquidation value added to 70% of the CME value. Livens (1986) has produced a table for this purpose, which argues that different levels of control require different hybrid weightings. This is displayed in Table 4.

Table 4: Suggested Weighting's (Livens, 1986, p.139)

<i>Shareholding Environment</i>		<i>Weighting</i>		
		<i>Asset</i>	<i>Earnings</i>	<i>Dividend</i>
1	Control (51% to 74%)	20	75	5
2	Effective control (26% to 50%)	20	65	15
3	No controlling interest (26% to 50%)	10	40	50
4	No controlling interest (up to 25%)	10	25	65
5	Control elsewhere (up to 49%)	5	20	75

⁷¹ For example, Livens (1986).

It is immediately apparent that such a method is very arbitrary. Livens (1986) does not justify these figures, and other weightings could be considered appropriate. Theoretically, there is no basis for using a hybrid method. This approach simply adds more judgment to the valuation process, as weightings for the individual methods need to be chosen. There is no guarantee that the best aspects of each valuation method will be incorporated under such an approach. Rather, the assumptions implicit within them are likely to be further obscured.

D. Chapter Summary

The application of modern finance theory to the valuation of unlisted companies, is a natural extension from finance theory's traditional focus on listed securities. Discounted cash flow (DCF) analysis has been shown to be a superior means by which unlisted companies can be valued as going-concerns. DCF analysis can be considered both intuitively sensible, and theoretically sound. Many of the criticisms levelled at it in the literature, are criticisms that are equally applicable other traditional valuation methods. One of the biggest advantages of the DCF method, is that any of the assumptions made in the estimates which are imputed, will be readily apparent. This encourages valuation experts to undertake a comprehensive analysis, so they can justify the judgment calls they make. The next Chapter discusses some of the key valuation factors that may need to be accounted for in such an analysis.

The capital asset pricing model (CAPM) became a popular means by which the valuation of shares in listed markets could be assessed. However, its accuracy has been increasingly challenged, in particular because of the assumption that all systematic (undiversifiable) risk can be accounted for by one factor, beta. Additionally, the assessment of beta for an unlisted share will be a judgment call, because of an absence of frequent market price data. Ultimately, there would appear to be no significant benefit in using the CAPM over DCF analysis. The CAPM simply necessitates that more variables be evaluated by judgment, making the CAPM a less parsimonious approach than DCF analysis.

The arbitrage pricing theory, like the CAPM, is a means by which the risk of securities can be assessed. Unlike the CAPM, it relies on a number of factors in its derivation of risk. However, these factors have not been clearly defined, with debate existing as to how they should be determined. Although the APT has performed better than the CAPM in empirical tests, it has also been criticised on a number of theoretical grounds. Additionally, there is doubt over whether the APT could be practically applied to a field where data is often sparse (as is the case with unlisted companies).

Capitalised maintainable earnings (CME) is a common traditional method by which a firm can be valued as a going-concern. Unlike DCF analysis, the inputs into a valuation under CMEs are less clearly defined. For example, there are differences of opinion in the literature over whether the evaluation of maintainable earnings should include future estimates. Additionally, it can be argued that firms do not attempt to maintain set levels of profits, and hence, the CME method is not intuitive. Furthermore, CMEs relies on accounting data (profits), rather than the actual return to investors (cash flows). This Chapter has posited that the CME method is not easily reconcilable with DCF analysis, and is an inferior means by which to value unlisted companies.

The desirability of utilising comparable companies to value unlisted shares, either through the use of price earnings ratios or cash flow multipliers, is limited. This is because, by their very nature (not being listed), it will be difficult to find appropriate company comparisons. Although the PER method has proven popular in the valuation of listed shares, this is changing, with cash flow based alternatives becoming more common. The use of cash flow multipliers in New Zealand, is hamstrung by a lack of the data that would be needed for the method to be effective for unlisted companies.

Asset based valuation methods provide a useful back up when calculating the value of the firm. It can be argued that theoretically they should be used when the value of a firms assets exceeds its going-concern value, in which instance the firm should be liquidated. Consequently, a companies liquidation value will be of interest to any potential purchaser. One asset that is particularly difficult to value is goodwill. Although a number of methods have been developed for the valuation of goodwill, none of them has gained complete acceptance. Given that any investor should focus on the total return generated from a company, goodwill can simply be assessed as the

difference between the total value of the firm, and the value of its tangible assets. Valuing goodwill as a separate asset would appear to be a subjective, and perhaps also fruitless, exercise.

The need to value minority interests in an unlisted company, is a further complication. Two methods exist. Companies can be valued in their entirety, with a subjective discount or premium applied to the value of the minority shares. Alternatively, a dividend model can be used to assess the future benefits accruing to the minority shareholder, if it is accepted that the shares are not readily marketable. With either method, judgment will be a key factor.

Hybrid valuation methods should be viewed as inappropriate compromise solutions to the valuation problem. They simply add an extra arbitrary assessment (the weight given to a particular valuation method) into the valuation process. Many of the assumptions that have gone into a particular valuation, will simply be further obscured by the aggregation of it with other valuations methods.

Chapter Four — Prior Research

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A. Introduction

A comprehensive statement of valuation principles is difficult to evolve because of the variety of the practical situations. Sketchy and tentative rules are readily available, but generally they are of little value in solving a particular valuation problem. Dogmatic and precise rules can be developed but these would be of restricted applicability. And to the careful mind dogmatic answers create doubts rather than allay fears.

Grunewald (1961, p.3)

In New Zealand, and internationally, prior research on the valuation of unlisted companies has been limited, and poorly summarised. To provide an adequate understanding of the issues, this Chapter arbitrarily categorises the prior research into three areas: valuation method, objective formula, and valuation factors.

First, research on the method of valuation will be discussed, both in New Zealand and internationally. Next, early North American research that attempted to derive an objective formula will be outlined. Research into the factors important for the valuation of unlisted companies valuation is then discussed, and also split into two categories, North American, and international. Finally, a brief summary concludes the Chapter.

B. Valuation Method

Despite the importance of the valuation method in the determination of an unlisted companies value, empirical research in the field has been scant. This section discusses some of the studies which have been undertaken, both internationally and in New Zealand.

I. International

An Australian researcher, Brown (1991), discussed, and encouraged the use of DCF (discounted cash flow) analysis. Whilst reviewing the relative strengths of various

methods, he summarised the recommendations of a variety of valuation/finance texts. This is displayed in Table 5. Brown (1991) divided the table into two categories, capitalisation of earnings techniques (future accounting profit, expected dividends, and cash flow analysis) and asset valuation techniques (book value, liquidation value). Table 5 highlights the wide range of methods that are discussed in standard texts.

Table 5: Valuation Methods in Standard Texts (Brown, 1991, pp.19-20).

Author	Area in question	Comparison of "like sales"	Book value	Liquidation value	Future Accounting Profit	Expected Dividends	Cash Flow Analysis	Other
Kime	Private Co. Shares	Y	Y	Y	Y	Y (Growth not considered)		
Atva	Companies' Businesses				Y	Y		
Ferrett	Shares						Y	
Hancy & Jackson	Shares	Y			Y	Y	Y	
Guben et al.	Large income producing properties	Y			Capitalisation of net income			Replacement cost = value
NCSC Rel. 102	Valuation reports in takeovers			Y	Y ^{X⁷}		?	What an alternative acquirer might pay
Harv Law Rev	Appraisal Cases	Y (e.g. stock exchange)	Y	Y	Y	Y		What an alternative acquirer might pay
Hyam	Land	Y			Capitalisation of Net Rent			
Adamson	Companies businesses and shares				Y	Y	Y Mentioned p.52. Dismissal due to the differences between perpetual and present value being insignificant	
Robinson	Land valuation						Y	
Tolhurst	Shares in unlisted companies	Y	Y	Y	Y	Y		
Gole	Shares		Y		Y			
	Land	Y			Y			
	Public Shares	Y (stock, exchange)			Y	N (p.79)		Replacement cost
Loneragan	Shares				Y			
Staines	Businesses	Y	Y	Y	Y			Asset Insurance Replacement Standard Formula
Baum (Whipple Com. Rent Rev)	Lease rent reviews						Y	
Feros & Pengitiley	Business Appraisals	Y	Y		Y		Y (p.187)	
D'Ambrosio & Hodges	Expert Reports						Y	
Brealey & Myers	Finance Theory	Y					Y	
Steele			Y	Y	Y		Y	Replacement value
Weston & Copeland	Finance Theory	Y	Y	Y			Y	Fair market value

Y = Yes, N = No

^{X⁷}The Comment is made in the original table by Brown "Is this strictly correct". Presumably an error has been made.

Brown (1991) went on to investigate Court judgments concerning valuation methods. The concept of value is the same in Australian, British, American, Canadian and New Zealand Courts, so the cases are comparable. Brown (1991, pp.21-25) summarised eleven Court cases from these countries, and tabulated the information (using a similar format as Table 5 and Table 6). Brown (1991, p.12) stated that "... no

Table 6: Valuation Methods in Australian Courts (Brown, 1991, p.25-27).

Australian Cases	Area in question	Comparison of "like sales"	Book value	Liquidation value	Future Accounting Profit	Expected Dividends	Cash Flow Analysis	Other
<i>Queensland Co-op Milling Assoc. Ltd v Hutchinson</i> (1976) 2 A.C.L.R. 188, Qld Sup Ct.	s.320 (Oppression case)			Appellant argued for liquidation method, since company history of trading losses meant could not use earning basis				Respondent used rule of thumb value = price/unit to av no. of units sold per wk. Ct approved of this method. Took account of potential to the purchaser of the co. as a going concern.
<i>Albany and Ors v Commonwealth of Australia</i> (1976) 12 A.L.R. 201, Jacobs J.	Valuation of land compulsorily acquired by Commonwealth	Def.: Valued land using 3 methods each based on comparable sales					Pl.: Valued land on the basis that the best use of the land was mainly for residential development and did so using a discounted cash flow method of valuation. Jacobs J. declined to accept DCF because of the erroneous assumptions made by the Pls' expert witnesses in arriving at their valuation. Pls also valued the land licensed to a company as a quarry on DCF basis. This the Court approved of.	
<i>Re Dalkeith Pty Ltd</i> (1985) 3 A.C.L.C. 74 McPherson J.			Used book value of company at date prior to dispute. Major assets land revalued & taken into account Net Asset Value of share (method chosen by articles)					
<i>R. Plaisted Investments Pty Ltd & G. Plaisted Investments v Bonell</i> (1982) 6 A.C.L.R. 452, Qld Sup. Ct. Connolly J.								
<i>Reynolds v Commissioner of State Taxation (W.A.)</i> (1986) 17 A.T.R. 987	Valuation for stamp duty purposes				Taxpayer argued that value should be obtained from capitalising expected future maintainable profits. Accepted (N.B. Burt C.J. used incorrect test & referred to value to purchaser. This contrary to authority; decision questionable)		Cmnr sought valuation on DCF basis. Rejected (Actuary only expert witness for Cmnr.)	Taxpayer in the alternative argued that "super profits" method be used. Rejected.
<i>Sanford v Sanford Courier Services Pty Ltd</i> (1986) 10 A.C.L.R. 549, Waddell C.J. in Eq.				Pl.: Valued shares upon orderly realisation of assets following a winding up		Def.: Valued shares by capitalising the expected dividend stream, assuming that the emoluments paid to certain employees had been on a commercial basis		
(1986) 11 A.C.L.R. 373						Pl.: Used perpetuity to obtain value	Def.: Present value of expected dividend stream over next 4-5 yrs not accepted as no certainty about the size or duration of future profits Valuation in Pt A statement was arrived at using DCF Analysis. Method accepted without question by Court. Issue not specifically raised	
<i>Hills Minerals N.L. v Spargos Exploration N.L.</i> (unreported, Sup. Ct. W.A., Wallace J., 15 April 1987)	Whether valuation in Pt A statement breached s.44 of <i>Companies (Acquisition of Shares) Code</i>							

Pl. = Plaintiff, Def = Defendant

evidence was found to indicate whether or not discounted cash flow analysis had been considered by British or New Zealand courts”.

Courts in the United States had considered cash flow analysis from the early 1950s.⁷² Brown (1991, p.12) posited that: *“This is not surprising owing to the growth of finance research and theory predominantly in the United States at the time”*. Initially, the view was taken by the Courts that actual figures were preferable to forecasts. Later (1983), forecasts were considered acceptable so long as they are founded on facts and evidence at the time of valuation, and not the result of speculation.⁷³ By contrast, in Canada as recently as 1978, Brown provided evidence (1991, p.12) that the Courts did not consider cash flow analysis an acceptable method of valuation.⁷⁴ However, in 1987 the Canadian Courts expressly approved the use of discounted cash flow analysis as a method of valuation.⁷⁵ Brown (1991) went on to investigate eight Australian cases. This is displayed in Table 6. Although Australian Courts have considered discounted cash flow analysis, Brown (1991) found no Court had closely analysed it; with only one Judge accepting it.⁷⁶

The tabulations produced by Brown (1991) are interesting, but they do not constitute all the cases in Australia (and elsewhere) on company valuations. For example, no matrimonial property cases were included. Brown gave no indication as to how these particular cases were selected. Simple, yet valuable statistics, such as the percentage of cases using a particular method in Australia, are not available because an arbitrary sample was used.

Brown (1991, p.18) concluded with the following statement:

Consequently, Australian Courts have not been given sufficient material on which to express an opinion upon the use of discounted cash flow analysis. What is required therefore is for lawyers and expert witnesses

⁷² For example, *Cottrell v Pawcatuck Co* A.2d 225, 229 and 232 (1956)

⁷³ *Weinberger v UOP Inc* 457 A.2d 701 (Del Sup Ct (1983)).

⁷⁴ *Neonex International Ltd v Kolasa* (1978) 84 DLR (3d) 446.

⁷⁵ *Re Cyprus Anvil Corp v Dickson* (1987) 33 DLR (4th) 641

⁷⁶ Jacobs J. in *Abany and Ors v Commonwealth of Australia* (1976) 12 ALR 201.

in the finance field (valuers, accountants and actuaries) to educate one another . . . By educating one another, both will be able to establish to the satisfaction of the courts the acceptance of discounted cash flow analysis as a reliable and commercially accepted method of valuation in theory and practice, thereby better serving their clients.

After arguing strongly for the greater use of modern finance techniques, Keane (1992) conducted interviews to determine the valuation methods used by 16 accounting firms in Glasgow. The result of this study is shown in Table 7. The findings are similar to those of Brown (1991). Again, little use was made of discounted cash flows.

Table 7: Valuation Methods of Accounting Firms (Keane, 1992, p.10).

	<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 [sic] P/E to historic earnings	—	1	1	14
Apply historic [sic] 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 valuation 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

Keane (1992, p.19) made the following observations concerning the shortcomings of accountants, who were found to be predominantly using PERs (price earnings ratios):

- I. a general tendency to use earnings rather than cash as the relevant income flow;
- II. a general disregard or lack of awareness of the relevance of portfolio and capital asset pricing theory to the valuation of unlisted securities;
- III. a widespread tendency to apply historic [sic] 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;

- IV. 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;
- V. a common assumption that any theoretical shortcomings in the valuation approach employed are relatively unimportant, on the grounds that these are likely to compensate for one another and, if not, will be largely “corrected” in the negotiation process.

Keane (1992) viewed item three as different from the other findings, because it reflected a deficiency in valuation theory, rather than a failure to use an established valuation principle. When applying PERs as an indirect means by which to value companies, it is necessary to use comparable earnings with comparable PERs.⁷⁷ However, Keane (1992) found that accountants in Scotland were using future maintainable earnings with PERs selected from firms in the sharemarket. This method is theoretically inconsistent with both the PER approach, and CMEs (capitalised maintainable earnings), as it leads to a double counting for growth.

Ultimately, on the basis of the results, Keane (1992) concluded that unlisted company valuation in Scotland is based more on negotiation than theoretical principles. One problem with the research of Keane (1992) is the small sample size which was examined; the accounting firms researched may not be representative of valuers in Scotland. However, unlike Court research, it had the advantage of including valuations that had not progressed to the Courts.

II. New Zealand

Little research has been conducted into the valuation of unlisted companies in New Zealand. However, a number of practitioners have written articles, books or held seminars that have discussed the valuation methods that should be used. A selection of these authors are summarised in Table 8.

⁷⁷ This was discussed in Chapter 3.

Table 8: Company Valuation Methods in New Zealand Literature

Author	Comparable Firms	Book Value	Liqu. Value	Capital. Maintain. Earnings	Divi. Based	Super Profit Goodwill	Discounted Cash Flows	Other
Pearce 1941a,b	√		√	√		√		
The New Zealand Valuer 1964			√	√				
Crimp 1965	√	√	√	√	√			Price Earnings
Speedy 1967	√		√	√	√	√		Goodwill rule of thumb + Net Assets
Pope 1972	√		√	√	√	√		
Hadlee 1986			√	√				
Hagen 1987			√	√	√		√	
Pricer, Vos & Dixon 1987	√	√	√	√			√	Various others
Blair 1990			√	√	√	√	√	CAPM
Tiller 1990						√		
Briscoe 1991			√	√				
Hicks, Walton Watts 1992			√	√				
Hayde 1992	√			√	√			
Dunckley 1993	√						√	Maintainable Cash Flow
Archbold 1994	√			√				Goodwill rule of thumb
Burn 1995			√	√	√		√	Net Asset Value

Only five of these sixteen (31% approximately) commentators discussed discounted cash flow analysis, and it often then only received a mention (for example, Burn (1995)). Most of the commentators supported the approach of Hicks, Walton, and Watts (1992) whose matrimonial property valuation seminar discussed what appear to

be the two most supported methods in New Zealand. These are the earnings capitalisation method, which is considered appropriate for going concerns, and the asset liquidation method which is preferred for non-going concerns. However, a number of authors did discuss goodwill super profit approaches. The use of comparable firms was often recommended as a factor to be imputed; rather than a method in itself. Dividend based approaches were regularly advocated for minority interests.

Some of the researchers backed up their opinions with examples of cases, and Court decisions. However, none of the authors did this for discounted cash flow analysis (although Dunckley (1993) used the obscure concept of maintainable cash flow for a tourist venture). Apparently, in New Zealand there has been no significant research that has investigated unlisted company valuations.

C. Formula Approach to Valuation

Unlike New Zealand, US (United States of America) Tax Courts⁷⁸ have taken a more regulatory approach to the valuation of closely-held companies. In 1920, the Committee on Appeals and Review Memoranda released the Appeals and Review Memorandum (ARM) 34. The problem of intangible asset losses, in particular, from the Eighteenth Amendment (Volstead Act), was addressed.⁷⁹ ARM 34 held that a suitable return for intangible assets was 20%. ARM 68, which was also issued in 1920, clarified that tangible assets should have a return of 10%. Although, at this point, no set formula was prescribed by the Courts for all closely-held firms, the Committee did suggest the formula could be used for firms not affected by the Volstead Act. McCarthy and Healy (1971) argued this was unfortunate as it lead many valuers to utilise this arbitrary method.

⁷⁸ Concerning Estate and Gift taxes.

⁷⁹ The Volstead Act introduced prohibition into the US. Distilleries, breweries, and related businesses were severely effected.

An early US study into closely-held share valuation was undertaken by Rice in 1950. He started his introduction with the statement that: *“The importance of the problem of valuation in federal taxation has been exceeded only by its neglect”* (p.367). The theme of his paper rested on the criticism that determining value was difficult when the Courts in the US had failed to develop any clear standards. Judgments encouraged the use of various factors,⁸⁰ however, no standard existed by which to ascertain the weighting given to them. Ultimately, the Court was left in a position where: (Rice, 1950, p.376).

... the Tax Court must set out in each case a result for that case alone: a ticket “good for this day and train only.” Thus to an extraordinary degree, not only does the Tax Court — not the Congress — make the law, but it makes a separate rule for each case as it is presented

Rice suggested two steps to rectify the situation:

- I. All reference in the regulations to “all relevant factors” should be stricken.
- II. A specific formula for the valuation of close held stock should be adopted, based on the asset value of the issuing corporation.

The first step of removing references to “all relevant factors” was advocated on the basis that such statements were interpreted in practice to mean the decision made rested on no particular issue. Consequently, this statement was viewed by Rice as a concealing rather than revealing device.

Rice posited in his second step that a specific formula should be derived to rectify the situation. He argued that such a formula ought to be based on asset value rather than capitalised earnings as it *“... seems more fair, because there is less opportunity for variation in the results”* (Rice, 1950, p.388). This is because the alternative, capitalised earnings, requires two bases: the period of time over which to calculate the average earnings, and the capitalisation rate applied to the earnings.

⁸⁰ For example: book value of the assets and the stock, dividends and balance sheets for prior years, depreciation rates, working capital, present and potential market for the product of the company, potential competition for the company, etc.

However, Rice did accept that capitalised earnings may be valuable in assessing goodwill when “. . . *the earnings of the company are abnormal*” (Rice, 1950, p.389).

Johnson, Shapiro and O’Meara (1951) also advocated the development of a more objective means by which to value closely-held shares for taxation purposes. Their attempt to develop a formula to achieve this g_rminated from an empirical bias. Initially, an effort was made to define quantitative relationships between listed shares, and, earnings, dividends and book value. It was hoped that such relationships could then be used in the valuation of unlisted shares.

Their findings were not encouraging. No stable relationships appeared to exist between earnings, dividends or book value and the price of industrial common shares listed on the New York Stock Exchange.⁸¹ They suggested two possible solutions to this problem. The first would be for the Courts to use the formula (to be derived from further research) which reflected most accurately the price of listed shares in each occupational group. The second would be to modify the formula to provide a range through which the valuation would be encompassed. This would remove inordinate discrepancies between valuations, yet still allow for some flexibility.

The next significant US guideline was Revenue Ruling 54-57, which was issued in 1954 (McCarthy and Healy, 1971). Rather than follow the approach suggested by Rice (1950) and Johnson, Shapiro and O’Meara (1951), this ruling, which was refined by Revenue Ruling 59-60, did not advocate the use of a specific formula: (Revenue Ruling 59-60, s3, paragraph .01)

A determination of fair market value, being a question of fact, will depend on the circumstances in each case. No formula can be devised that will be generally applicable to the multitude of different valuation issues arising in estate and gift tax cases . . . A sound valuation will be based on all the relevant facts, but the elements of common sense, informed judgment and reasonableness must enter into the process of weighting those facts . . .

⁸¹ Four years were investigated: 1933, 1937, 1941, 1945. For each of these years high-low monthly data was obtained for the chosen sample. Linear regression was used to derive any relationships between earnings, dividends and book value against the average of the monthly high-low data over the year for each share.

Table 9: Suggested Rates of Capitalisation (Grunewald, 1961, p.87)

Predictability of Future Earning Power - Qualitative Characteristics	Estimated Growth Potential	Capitalisation Rate	Multiplier	Illustrative Industries
All organizations, large and small whose future earnings are predictable with a relatively high degree of accuracy. Past earnings have been quite stable, special talents on the part of the management not required, finances good, the element of risk low:	Above average growth prospects	4 - 6.25 %	25 - 16	Dairy products, electric power
	Less than average growth prospects	5.25 - 8.33 %	16 - 12	Banks, telephone
Medium-sized organizations whose future earnings are predictable with a fair degree of accuracy. Past earnings have fluctuated moderately over the business cycle, requires average management ability, operates in a highly competitive environment, finances fair, the element of risk moderate:	Above average growth prospects	5.56 - 8.33%	18 - 12	Cement, electrical equipment, paper
	Less than average growth prospects	7.69 - 11.11%	13 - 9	Department store, finance
Small industrial organizations whose earnings are predictable with little degree of confidence. Past earnings have fluctuated wildly over the business cycle, requires no special managerial skill, little capital required, operates in a highly competitive environment, fair finances, the element of risk high:	Above average growth prospects	7.14 - 12.5%	14 - 8	Air conditioning, television and radio
	Less than average growth prospects	11.11 - 20%	9 - 5	Textiles, vegetable oils
Medium and small industrial organizations whose earnings are predictable with little degree of confidence. Past earnings have fluctuated widely over the business cycle, requires unusual managerial skill and ability, operates in a competitive environment, fair finances, the element of risk very high:	Above average growth prospects	10 - 20%	10 - 5	Rare metals
	Less than average growth prospects	16.67 - 33.33%	6 - 3	Machine shops, motion pictures
Personal service businesses whose future earnings are unpredictable. Little capital investment required, no organization, no transferable goodwill:		25 - 100%	4 - 1	Insurance agency, theatrical agency

Grunewald (1961), unlike Rice (1950) (who preferred the use of net asset value as the basis of any formula derived), advocated an earnings capitalisation model be used as the basis of a formula approach. This was justified after “... *an exhaustive study of earnings, capitalization rates, and price earnings multipliers* ... *concluded that an earnings capitalization model should be the primary means for valuation and any other factors should be secondary in importance*”.⁸² Grunewald (1961) went on to suggest a

⁸² Quoted from Jensen (1978, p.241).

number of capitalisation rates based on the growth potential of the firm, which is displayed in Table 9. These rates are reflective of business conditions in the US in 1961.

Bosland (1963) surveyed Tax Court cases and received 401 usable replies regarding the importance of estate tax considerations in the sale or merger of small family-owned concerns. Of these, 41 percent stated tax considerations were very important, with 22 per cent thinking them moderately important. Accompanying this, Bosland examined all Tax Court cases between 1944 and 1960. Regarding the results from the Tax Court investigation involving valuations, Jensen (1978, p.241) cited the following quote from Bosland (1963, p.178), which illustrates the lack of clear guidelines from the Tax Court in the US:

The Court presumably requires the consideration of all elements in valuation, but it has never assigned any order of importance — except to recognise the priority of arm's length transactions and, possibly, earnings as the basis of fair market value. However, it still accepts asset values, book values, liquidation values, earnings, dividends, general outlook and numerous others and the parties continue to come into Court or face valuation problems without knowing how much weight is to be given to any one of the factors . . .

There seems to be considerable basis for the contention that the judges of the Tax Court are inclined to reach compromise decisions . . .

The Tax Court frequently alludes to the Treasury Regulations concerning the methods of determining fair market value as if they were the ultimate law.

Bosland (1964) also investigated over one hundred decisions by the Securities and Exchange Commission (SEC) in the US for the years 1942 to 1950, and 1956 to 1960. The Commission's work consisted of expert judgments on, mainly, ownership interests in utility companies. Bosland (1964, p.89) found:

The typical S.E.C. approach to valuation is that it involves the exercise of judgment rather than the application of anything resembling a specific formula. The basic guides to judgment seem to have been market earning power — past, present or prospective — and market quotations or actual market transactions in which buyers have arrived at a price by independent bargaining. Other methods . . . have been stressed in particular cases. But perhaps more often they have been ignored or assigned little, if any, weight.

In 1965, US Revenue Ruling 65-192 affirmed Revenue Ruling 59-60, and discussed the limitations of the formula approach of ARM 34 and ARM 68 (McCarthy and Healy, 1971). Revenue Ruling 68-609 (1968) superseded ARM 34 and ARM 68 and Revenue Ruling 65-192. It held that the formula approach should only be used if there is no better basis available for the valuation (McCarthy and Healy, 1971). It suggested capitalisation rates, that were only examples. Apparently this followed the approach of Grunewald (1961), who also provided a set of capitalisation rates.

Huggins (1973) used three financial models⁸³ to derive valuations for firms involved in US Tax Court cases. After applying the models to 37 Tax and District Court cases involving the valuation of closely-held shares, it was concluded that the models were not used by the Courts. The Courts were viewed by Huggins as simply averaging across Internal Revenue Service and taxpayer values. Jensen (1978, p.248) cited the following quote from Huggins (1973, p.57-58) which again confirms the lack of guidelines by the Courts:

The Internal Revenue Service has published guidelines for valuation purposes, yet the studies to date offer no proof of a common theme of interpretation or use of these guidelines by the Internal Revenue Service.

Jensen (1978) reviewed much of the literature on US Tax Court valuations until 1978. He split the research into qualitative and quantitative studies. For example, the research of Rice (1950) was classified under qualitative, whereas the work of Johnson, Shapiro, and O'Meara (1951) was considered quantitative. Such a classification scheme is interesting, as it allows the different approaches taken by researchers to be more easily compared. However, it has the downside that there are often strong similarities in the arguments and conclusions between qualitative and quantitative studies which may be glossed over. For example, the paper by Johnson, Shapiro and O'Meara (1951) was more of an extension of the work of Rice (1950) rather than a different approach altogether. Nevertheless, Jensen's paper provides a good summary of research in the field up until 1978. Jensen (1978, p.248) concluded that :

⁸³ Capitalisation of earnings, which is discussed in Chapter 4, and two obscure models, the Graham and Dodd model, and the Malkiel model.

There are general guidelines . . . listing factors that are important in valuing closely held stock . . . (there exists) much disagreement over how they should be interpreted . . . Neither the courts, the Internal Revenue Service, nor taxpayers appear to be making much use of the models developed by finance theory for valuing stocks. Neither the net asset formula, comparable capitalization rates, regression analysis, capitalization of earnings, Graham and Dodd intrinsic value, or the Malkiel model appear to have ever experienced widespread use.

Therefore, a number of early US researchers lamented the lack of a strict formula approach from the Courts. ARM 34 and ARM 68 did propose a simple formula, which was extended beyond its initial purpose. However, Revenue Ruling 68-609 overturned the use of this formula, and suggested capitalisation rates which should be used only as a last resort. The next Section investigates North American research on the underlying factors which might constitute the information set used by valuation experts and the Courts.

C. Underlying Factors

By defining the underlying factors used by valuers, researchers are better able to understand the valuation process. This Section has been split into two categories, which is indicative of the two differing paths the literature has taken. North American (United States of America and Canadian) researchers have given this field considerable emphasis, to the extent that their work makes up the bulk of empirical research on the valuation of unlisted companies. Conversely, non-North American (international) research into valuation factors has been sparse, with few empirical studies having been undertaken.

I. North America

This Sub-Section will outline the valuation factors which North American (US and Canadian) researchers have investigated, and the importance of these factors. Their motivation for defining the important factors in valuations, can be viewed as a consequence of US Revenue Ruling 59-60 in 1959, which outlined the fundamental factors to be considered in each valuation case. These are reproduced in Table 10. However, Kantor and Pike (1987b, p.222) provided a justification for such research, beyond the fact that the US Revenue Rulings had encouraged it:

Where investors act rationally and prices respond to all available information, there can be little justification for valuing shares at anything other than market value. However, where markets do not exist or are far from 'efficient' it is necessary to determine the relevant information which shapes the perceptions and beliefs of investors regarding the earnings prospects and dividend paying ability of the firm.

Table 10: Revenue Ruling 59-60

.01 It is advisable to recognize that the valuation of the stock of closely held corporations or the stock of corporations where market quotations are either lacking or too scarce to be recognized, all available financial data, as well as the relevant factors affecting their fair market value, should be considered. The following factors, although not all-inclusive are fundamental and require careful analysis in each case:

- (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 good will [sic] or other intangible value.
- (g) Sales of the stock and the size of the block of stock to be sold.
- (g) The market price of stocks of corporations engaged in the same or a similar line of business having their stocks actively traded in a full and open market, either on an exchange or over-the-counter.

Martin (1975), after reviewing Revenue Ruling 59-60, analysed data obtained from Standard Research Consultants, Inc.,⁸⁴ who published abstracts of 156 US Tax Court decisions over the period from January 1949 to June 1970 (twenty one and a half years). From these abstracts, thirty one factors were found, which were then arbitrarily divided into three categories: conventional accounting data, other financial factors, and miscellaneous factors. These were displayed in three tables, which are combined in Table 11.

Table 11: Factors Found (Martin, 1975, pp.14, 15,16).

	Factors	Number of Times Utilized	% of Cases
	Conventional Accounting Data		
1	Historical earnings*	57	37%
2	Book value*	54	35%
3	Dividends paid or yield	30	19%
4	Net working capital	13	8%
5	Growth of net worth	8	5%
	Other Financial Factors Utilized in 156 Tax Cases		
1	Earning power*	35	22%
2	Stock being valued represented a minority interest*	22	14%
3	Dividend-paying capacity*	11	9%
4	Capitalization of average earnings	9	6%
	Miscellaneous Factors Utilized in 156 Tax Cases		
1	Expert testimony	71	45%
2	Prior sales of stock*	66	42%
3	Nature and history of business*	38	24%
4	Tangible assets (value of underlying assets)	33	21%
5	Size of block being valued*	27	17%
6	Lack of evidence offered by taxpayer	27	17%
7	Restrictions on stock	25	16%
8	Marketability	18	11%
9	Character and quality of management	16	10%
10	General economic condition*	16	10%
11	Position in industry*	11	7%
12	Market value of stock of comparable companies	11	7%
13	General stock market condition	9	6%
* Indicates factors considered in Revenue Ruling 59-60.			

⁸⁴ Referenced by Martin (1975) as: Standard Research Consultants, Inc., *Corporate Security Values as determined by the Tax Court* (New York: Standard Research Consultants, Inc., 1970), pp.1-9.

Of the conventional accounting data, it is clear that historical earnings was the most important factor. However, historical earnings was still only used in 37% of cases. Martin (1975, p.14) gave two possible reasons for this:

... First, in many instances a single factor other than earnings may emerge as the major determinant of value. For example, in cases where arms length transactions in the stock have taken place, the court will often accept as a prima facie basis for valuation ... Second, the term "historical earnings" refers to only one of several possible utilizations of earnings data. It does not include instances where the court has capitalized earnings or made a subjective determination of earning capacity. These last two factors, because they require some non-accounting information, have been categorized as "other financial factors" and are discussed below.

Apparently, the US Courts rated the assets of companies almost as highly as their earnings, because book value was a factor in 35% of cases. Martin (1975, p.14) quoted a Court decision that indicated why book value was important: *"In valuation of closely-held stock, the book value must serve as a basis, if the result is to be anything more than a dignified guess"*.⁸⁵

Of the other financial factors considered important, earning power ranked the highest, with it being used in 35% of cases. Martin (1975) explained that earning power lends itself to two possible interpretations. Either the quantitative term (from financial analysts) of the profit margin times the turnover of net operating assets, or alternatively, a more vague concept relating to the estimation of a firms future profits.

Capitalisation of average earnings was an unpopular method in the US Courts (only 6% of cases used it). Martin (1979, p.15) explains how the method was used, and why it was unpopular:

... The Court will often look to the capitalization rates of companies whose stocks are actively traded and which are reasonably similar to a closed corporation. When an appropriate rate is determined, the Court will capitalize the average earnings of recent years or, if a trend is apparent, extrapolate earnings into the future. Obviously such a calculation relies heavily on past earnings data. Judging from the number of times "capitalization of average earnings" was used, and the number of times

⁸⁵ Rufus F. Turner (64,161 P-H T.C. memo 1964).

"historical earnings" was used, it appears that the court would rather rely on the historical figure and avoid introducing an arbitrary capitalization rate.

The miscellaneous factor, expert testimony, was the most common of all the factors considered by the Courts, with 45% of cases including it. However, Martin (1975, p.16) warned experts that they needed to consider all relevant factors, with the following Court quote:⁸⁶

We agree that the factors used by the experts are valid and appropriate under the circumstances, but we do not believe that either expert has given sufficient consideration to the other relevant factors necessary in arriving at the true value of the stock.

The second highest ranking factor, prior sales of stock, confirmed that the Court preferred market values where possible: (Martin, 1975, p.16)

... when it can be shown that bona fide arm's length transactions have occurred, the court will frequently accept the selling price as a final value, providing the transactions were sufficiently recent.

Martin (1975, p.16) concluded that: *"One should recognize that many factors enter into the valuation process, but some are more relevant than others"*.

Englebrecht (1976) conducted research on the importance of factors with two models. The first was a simple regression model using the mean of taxpayer and Internal Revenue Service values. The second was the multiple regression model presented in Equation 16. This model used dummy variables to represent the presence of a factor in a case; a value of 0 was given if the factor was not present and a value of 1 if it was. The factors chosen built upon Revenue Ruling 59-60, although Englebrecht (1976) did not discuss how Revenue Ruling 59-60 was expanded from 8 to 19 factors.

⁸⁶ Estate of Mathew I. Heinold (65,006 P-H T.C. memo 1965).

Equation 16: (Englebrecht, 1976, pp.56-57)

$$Y_e = B_0 + B_1 X_1 + B_2 X_2 + B_3 X_3 + B_4 X_4 + B_5 X_5 + B_6 X_6 + B_7 X_7 + B_8 X_8 + B_9 X_9 + B_{10} X_{10} + B_{11} B_{11} + B_{12} X_{12} + B_{13} X_{13} + B_{14} X_{14} + B_{15} X_{15} + B_{16} X_{16} + B_{17} X_{17} + B_{18} X_{18} + B_{19} X_{19}$$

Key: Y_e = estimated fair market value of the closely held security by the Tax Court
 B_0 = the Y intercept
 B_1, B_2, B_3 = beta coefficients
 X_1 = average earnings (five year average)
 X_2 = average dividends (five year average)
 X_3 = book value
 X_4 = dividend paying capacity
 X_5 = position in industry
 X_6 = expert testimony
 X_7 = ability of management
 X_8 = background of business
 X_9 = general economic conditions
 X_{10} = market value of stock in comparable industries
 X_{11} = prior sales of stock
 X_{12} = controlling interest in closely held stock
 X_{13} = minority interest in closely held stock
 X_{14} = intangible value
 X_{15} = earning capacity
 X_{16} = restrictive agreements
 X_{17} = economic outlook of the specific industry
 X_{18} = marketability of closely held stock
 X_{19} = all the other relevant factors

All US Tax Court cases (67) involving the valuation of closely-held shares were considered for the period from 1 January 1950 through 31 December 1974. Englebrecht (1976, p.97-98) achieved the following results with the second regression model:

The statistical results of the multiple regression model showed that nine out of the nineteen guideline variables were statistically significant at the 0.05 level. These variables were book value, dividend paying capacity, expert testimony, background of business, general economic conditions, market value of stock in comparable industries, minority interest, restrictive agreements, and all other relevant factors. Of these statistically significant variables, the dominant ones were book value and dividend paying capacity. Book value explained 68% and dividend paying capacity approximately 10% of the variance around the regression line.

Additionally, the first regression model, which used the mean of taxpayer and Internal Revenue Service values, was also found to be statistically significant. Consequently, the study was unable to determine which model reflected the one used by the Tax Court. Englebrecht (1976, p.103) offered the explanation that:

The Tax Court employs guideline variables in valuing closely held stock. The taxpayers and IRS also are using the guideline variables that the Tax Court deems very important, such as book value, dividend paying capacity, etc. However, they are weighting these factors in a manner which differs from that used by the Tax Court. In other words, the taxpayer submits low valuations in order to minimize his tax liability, and the IRS submits high valuations to maximize the tax.

Englebrecht's (1976) finding that book value and expert testimony were important, is consistent with the results of Martin (1975). However, Englebrecht (1976) did not find that the earnings factors held the same importance, although this may have been a consequence of the differing research methods used.

Kantor (1984) researched the factors cited in 408 US Tax Court cases. The factors selected were the same as those of earlier studies by Gill (1960) and Martin (1975). Table 12 displays these factors, and the number of cases which comment on them.

Kantor (1984) also summarised those factors selected for study in previous research on Court case data. This is displayed in Table 13. Unfortunately, Table 13 is not comprehensive. It does not include all of the research in the field up until this date (for example, it misses Huggins (1973)). Additionally, it gives the impression that this research had the intention of investigating the factors considered by the Courts. However, with some of this research (for example Rice (1950)) no real attempt was made to search for factors. Nevertheless, it does illustrate the growth over time of the factors which researchers have considered worth investigating.

Table 12: Variables of Importance in 408 US Tax Court Decisions, 1946-1982 (Kantor, 1984, p.110).

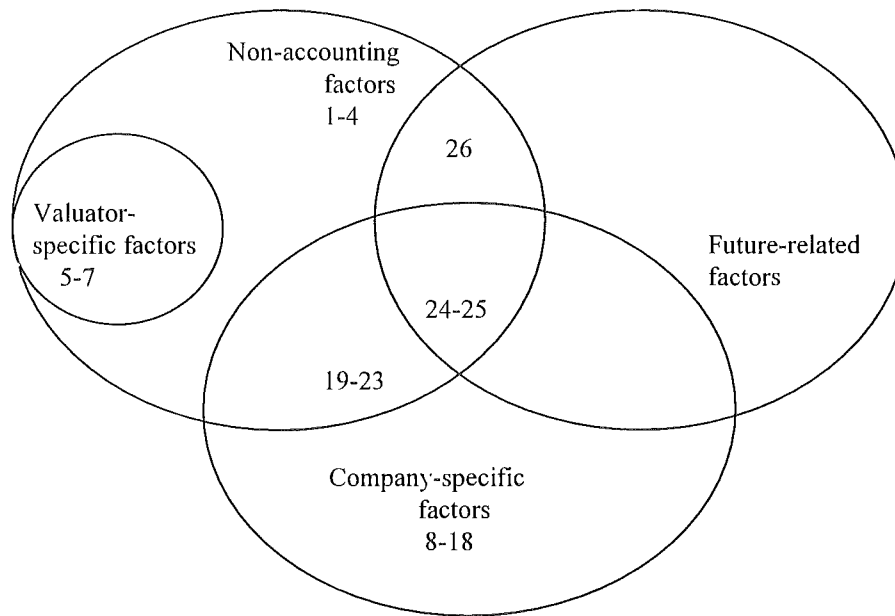
Variables discussed	Number of cases	% of total cases
Prior sales of stock	170	42
Expert testimony	103	40
Historical earnings	154	38
Book value	121	30
Lack of evidence offered by taxpayer	115	28
Nature and history of business	111	27
Tangible assets	100	25
Restrictions on stock	76	19
Dividends paid or yield	72	18
Marketability	69	17
Earning power	67	16
Stock valued representing a minority interest	64	16
Character and quality of management	42	10
Size of block being valued	40	10
Market value of stock of comparable companies	39	10
General economic conditions	30	7
Capitalisation of average earnings	28	7
Dividend paying capacity	25	6
Position in industry	24	6
Net working capital (liquidity)	22	5
Growth of net worth	18	4
General stock market conditions	12	3

Kantor (1984) concluded that the judiciary relies on both objective historical data (for example, prior sales of stock, historical earnings, book value) and expert testimony, which is consistent with the findings of Martin (1975). The importance of book value and expert testimony is also consistent with the research of Englebrecht (1976).

Kantor and Pike (1987a, and 1987b), whilst building upon the work of Englebrecht (1976), undertook a dual approach to investigate the importance of accounting information to professional share valuation experts. First, they surveyed all 559 members, associates or candidates of the Canadian Institute of Chartered Business Valuators (CICBV, open valuers) and 63 notional valuers who worked for Revenue

Table 13: Variables Considered in Prior Empirical Studies (Kantor, 1984, p.111).

Studies	Rice (1950)	Johnson Shapiro O'Meara (1951)	Grunewald (1961)	Bosland (1964)	Englebrecht (1976)	Jensen (1978)	Lathen (1982)
Variables discussed							
Book Value		√	√	√	√	√	√
Goodwill (intangible value)	√		√		√	√	√
Historical earnings		√	√	√	√	√	√
Historical dividends		√	√	√	√	√	√
Leverage			√	√	√		
Liquidity			√	√	√		
Earnings prospects			√	√	√	√	√
Previous sales			√	√	√	√	√
Size of block valued			√	√	√	√	√
Market value of stocks of comparable companies			√	√	√	√	√
Nature/history of company			√		√	√	√
General economic conditions					√	√	√
Industry type				√			
Size of company				√			
Restrictive agreements			√		√	√	√
Marketability			√		√		√
Position of company in the industry			√		√	√	√
Nature/history of the industry			√				
Industry prospects			√		√	√	√
Management quality/ability			√		√	√	√
Dividend prospects			√		√	√	√
Taxation implications							
Expert testimony					√	√	√
All other relevant factors					√	√	√
R = recommended by USA revenue Ruling 59-60 (1959)							

Figure 3: Variable Categorisation (Kantor and Pike, 1987b, p.222).

Key to variables:

1	General economic conditions	14	Presence of goodwill
2	Industry background	15	Controlling interest
3	Market value of shares of comparable Companies	16	Minority interest
4	Position of company in industry	17	Size
5	Valuator ability	18	Tax implications
6	Valuator experience	19	Company background
7	Valuator judgment	20	Management
8	Book value of net assets	21	Presence of restrictive agreement
9	Fair market value of net assets	22	Prior recent sales of shares
10	Historical dividends	23	Purpose of valuation
11	Historical earnings	24	Future dividends prospects
12	Leverage	25	Future earnings prospects
13	Liquidity	26	Future industry prospects

Canada.⁸⁷ Following Whittington and Whittenburg (1980),⁸⁸ Kantor and Pike justified their selection of the 26 factors surveyed on the basis of prior empirical analysis, US Court cases, and standard texts. These factors are illustrated in Figure 3. This is an

⁸⁷ A response rate of 41% was obtained for the open valuers. A 57% response rate was achieved with notional valuers working for Revenue Canada.

⁸⁸ Whittington and Whittenburg (1980) advocated the use of analytical techniques with Court data. They statistically analysed the classification of debt and equity over time.

impressive means by which the factors can be viewed, as it groups them into four simple areas: non-accounting factors, valuator-specific factors, future-related factors, and company-specific factors.

Kantor and Pike (1987a, and 1987b) found that for both the notional and open valuers who performed valuations, most of the factors were important (indicating that valuation is a highly complex process), with earnings prospects being the most important (although, for notional valuers, this was not significantly different from the second most important variable). The second most important variable for both groups was fair market value of net assets. This supported the impression later found in interviews that valuation experts favour an earnings based approach, backed up by an asset based valuation method (Kantor and Pike, 1987b). Little attention was given to dividends, the preference being for earnings approaches. Historical accounting information did not rank highly (for example, historical earnings ranked about half way amongst the factors). This is interesting considering Martin (1975), Englebrecht (1976) and Kantor (1984) found book value and historical earnings to be key. Notional valuers grouped the factors to a smaller degree than open valuers. Valuers agreed amongst themselves (open and notional) as to the relative importance of factors, suggesting valuers are homogeneous in their perceptions and beliefs concerning the factors influencing share value. Factor analysis produced similar results between the two groups, although minor differences did exist.

These findings were supported by Kantor and Pike (1987b) via in-depth interviews with 44 valuers. Using a smaller sample of the same valuers, experiments were performed. Data was collected in three steps: an open interview of the valuation process adopted, an examination of the documentary evidence supporting recent unlisted share valuations and a card ranking exercise.⁸⁹ Future earnings prospects was still clearly the most important variable. Kantor and Pike (1987a, and 1987b) commented that an advantage of the method was that it used non-Court data. Madeo (1979) had previously argued that the use of Court data creates a sample bias as disputes

⁸⁹ This card ranking experiment is further discussed in Chapter 6.

which go to Court are different from those which do not.⁹⁰ Kantor and Pike (1987a, and 1987b) believed their investigation was the only research on the valuation of unlisted companies which used non-Court data (up until 1987).

Pike, Sharp and Kantor (1988) utilised another method to investigate the factors in unlisted company valuations. They studied the extent to which accounting data can predict valuation figures. Information was obtained from 7 accounting firms (290 valuations) which commonly undertook valuation work. This information included: key accounting factors, the valuation figure, and the purpose for the valuation (dummy variables used for tax related, or purchase/sale). Part of the motivation for the study was the finding by Kantor and Pike (1987a, and 1987b) that, although not unimportant, historical information such as book value, published earnings and dividend figures did not rank higher. In selecting the accounting factors chosen, Pike, Sharp and Kantor (1988) used only six proxy factors for the larger (26) factor set selected by Kantor and Pike (1987a, and 1987b).⁹¹ Their reasoning was: (Pike, Sharp, and Kantor, 1988, p.251)

Valuation theory prescribes expected future earnings (or cash flows) and its associated level of market risk as the major determinants share values. We suggest that the difficulties in making such estimates lead valuers to adopt proxies based on the historic [sic] earnings data. For example, historic [sic] accounting earnings and earnings growth are proxies for future earnings; earnings variability, leverage and liquidity are risk proxies; and book value of equity provides the value base from which valuations proceed.

Regression analysis allowed an investigation into the extent to which such data could predict the valuation figures calculated by the accounting firms.⁹² They found support for three hypotheses:

H1: The valuation of unlisted shares can be explained largely in terms of historical accounting information, ultimately: Earnings, Earnings variance, and Book value. (The Log of these three variables accounted for over 80% of the variance of the Log of the total share value for the firms).

⁹⁰ This will be discussed in greater depth in the Chapter 6.

⁹¹ Historic [sic] accounting earnings, growth in earnings, and variability of earnings over the past three years, book value of equity, leverage (total debt/total assets) and liquidity (current assets/current liabilities).

⁹² Using logarithms of the independent and dependent variables.

H2: That no significant differences exist between the valuations of the various accounting firms. (Canada has an active professional valuation body which may to some extent explain this).

H3: Information as to the purpose of the valuation does not alter the valuation. (This provides support for legal case study research).

These results were viewed by Pike, Sharp and Kantor (1988) as confirming the findings of Court research. Book value and historical earnings were perceived as the most important factors by Canadian valuation experts. Pike, Sharp and Kantor also concluded that the possibility of a formula being derived for the valuation of most unlisted shares could not be ruled out. They modified their results to produce such a formula using earnings, book value and earnings variance. However, Pike, Sharp and Kantor (1988) do accept that such a formula may be subject to considerable error for individual cases.

Angelini and Martin (1989) investigated factors in US Tax Court, Court of Claims, and Federal District Court cases over the period 1970 to 1985. This is displayed in Table 14. The results provide further evidence that the US Courts tend to use few factors when determining share prices in tax cases. Angelini and Martin (1989) concluded that the Courts prefer easily computed amounts, such as, book value and earning power. The findings that book value, historical earnings, expert testimony, and prior sales of stock were important, is consistent with the earlier research (with the exception of Kantor (1987a, 1987b)).

In the majority of cases neither the Governments nor taxpayers value was sustained. Out of 260 cases, the commissioner's value was sustained in 68 (26%), and the executors in 35 (13%). With the remaining 157 cases (60%) the Judges determined the fair market value between the parties contentions. This is consistent with the findings of Englebrecht (1976) and Huggins (1973) who accepted the possibility that the Courts are simply weighting the parties valuations to achieve their valuation.

Table 14: Variables Considered (Angelini and Martin, 1989, p.30).

Determining Factors		Number of Times Used
1	Nature and history of the business	87
2	General economic outlook	16
3	Book value of the stock	65
4	Earning power	46
5	Dividend-paying capacity	21
6	Goodwill	32
7	Size of block of stock valued	25
8	Sales of stock (or lack thereof)	91
9	Comparisons with market prices of freely traded shares	35
Other financial data used by the judges included:		
1	Historical earnings	89
2	Dividends paid	37
3	Net working capital	12
4	Growth of net worth	9
5	Tangible assets	73
Some additional factors considered were:		
1	Position of the company to the industry	14
2	Character and quality of management	17
3	Marketability	51
4	Expert testimony	110

The influence of these researchers can be seen running through into US professional valuation bodies. The American Society of Appraisers (ASA) releases standards for its members. The standard BVS-III, General Performance Requirements for Valuation (ASA, 1992) recommends factors which should be collected for analysis. This is displayed in Table 15. These factors are related to previous US research in the field, although the broad nature of the categories suggests there is no longer much desire to limit business appraisers to a strict, formulaic valuation approach.

The array of factors searched for by researchers in North America has grown significantly over the years. However, US Courts and valuation experts appear to be using relatively few, historical based factors in their valuation assessments. With the exception of the study by Kantor and Pike (1987a, and 1987b), historical earnings, book value, prior sales of stock, and expert testimony have consistently been found as the key factors in the valuation of unlisted companies in North America.

Table 15: Information Collection and Analysis (ASA, 1992)

-
- | | |
|----|---|
| A. | Characteristics of the business, business ownership interest or security to be valued including rights, privileges and conditions, quantity, factors affecting control and agreements restricting sale or transfer. |
| B. | Nature, history and outlook of the business. |
| C. | Historical financial information for the business. |
| D. | Assets and liabilities of the business. |
| E. | Nature and conditions of the relevant industries which have an impact on the business. |
| F. | Economic factors affecting the business. |
| G. | Capital markets providing relevant information, e.g. available rate of return on alternative investments, relevant public stock transactions, and relevant mergers and acquisitions. |
| H. | Prior transactions involving the subject business interest in the subject business, or its securities. |
| I. | Other information deemed by the appraiser to be relevant. |
-

II. International

Researchers outside of North America have also considered which factors are relevant in valuations; a selection of their work will now be discussed. Baynes, Newman and Pitts (1984) present a summary of factors covered in English judgments, which is displayed in Table 16. Although not exclusive, Baynes, Newman and Pitts (1984) consider this table to be helpful. This is a different approach from North American researchers, who used analytical techniques to analyse all the cases available. The advantage of this table, is that a practicing valuer can quickly turn to the appropriate case to understand a particular issue. The downside, is that it provides no help as to the weighting which should be given to these factors.

Eastaway and Booth (1991) also consider a number of valuation factors in England. Like Baynes, Newman and Pitts (1984), they do not attempt to weight the relative importance of the factors. Table 17 provides a summary of the valuation factors they consider in Chapter 5 of their text.

Table 16: Enquires to be Made (Baynes, Newman and Pitts, 1984, p.88)

Factor	Case
1. The restriction upon transfer of shares	<i>Salvesen's Trustees v IRC</i> [1930] 9 ATC 43
2. The nature of the management	<i>Smyth v Revenue Commissioners</i> [1931] IrR 643
3. History of the Industry	<i>Salvesen's Trustees v IRC</i> [1930] 9 ATC 43
4. Prospects of the business	<i>Salvesen's Trustees v IRC</i> [1930] 9 ATC 43
5. History of the company	<i>Holt v IRC</i> [1953] 32 ATC 402
6. Prospects of the business	<i>Findlay's Trustees v IR</i> [1938] 22 ATC 437
7. The profit earning capacity of the company	<i>Smyth v Revenue Commissioners</i> [1931] IrR 643
8. Yield on quoted shares in the industry	<i>Crossman, Percy (dec) Re.</i> [1934] 13 ATC 326
9. The risks involved	<i>A-G of Ceylon v Mackie</i> [1952] 2 All ER 775
10. The return on the purchasers investment	<i>Smyth v Revenue Commissioners</i> [1931] IrR 643
11. The capital position of the company	<i>Gold Coast Selection Trust v Humphrey</i> [1948] 27 AC 459
12. The basis of the value of the assets	<i>Smyth v Revenue Commissioners</i> [1931] IrR 643
13. The amount of liabilities	<i>Smyth v Revenue Commissioners</i> [1931] IrR 643
14. The effect of inflation	<i>Holt v IRC</i> [1953] 32 ATC 402

Table 17: Relevant Factors (Eastaway and Booth, 1991, Chapter 5)

5.02	General economic and political situation
5.03	State of the industry
5.04	Profit records
5.05	Dividend record
5.06	Directors (ability)
5.07	Liquid resources
5.08	Gearing
5.09	Contingent liabilities and taxation provisions
5.10	Asset base
5.11	Customers and suppliers
5.12	Sales negotiation

A New Zealand author, Hagen (1987), reviewed the practical literature, and produced the factors shown in Table 18. Again, this is very similar in nature to the other factor lists that have been produced, and no attempt has been made to weight the factors.

Table 18: Important Factors (Hagen, 1987, p.19)

Factor	Case
1. Future earnings and prospects	<i>Holt v IRC</i> [1953] 32 ATC 402 and <i>Re Lynall dec Lynall and Others v CIR</i> [1971] 47 TC 375
2. Management ability	<i>Salvesen's Trustees v IRC</i> [1930] 9 ATC 43
3. Future prospects of the industry and the economy	<i>Salvesen's Trustees v IRC</i> [1930] 9 ATC 43
4. Fair market value of the net assets	
5. The company's liquidity gearing	
6. The company's position in the industry	
7. The customers, suppliers, products and company's vulnerability to changes therein.	

These authors, who are illustrative of most international researchers, have not placed the same emphasis (or found the same emphasis) as the North American researchers on the valuation factors: expert testimony, prior sales of stock, book value, and historical earnings. Ultimately, international research on valuation factors has been minor in comparison to that which has been conducted in North America. A possible reason for this, may be the existence of the Revenue Rulings in the US which have advocated the use of certain valuation factors. This contrasts, in particular, with New Zealand, where no statutes have determined the factors that should be considered. However, in one key New Zealand case, *Hatrick*,⁹³ which is discussed in more detail in Chapter 5, McCarthy and Turner JJ. suggested the importance of some factors: the type of business conducted, record of earnings and dividends, likelihood of future profits, classes of potential buyers of particular shares, extent of those classes, the nature of the companies assets and whether the assets can be easily converted to cash.

E. Chapter Summary

Internationally, very little research has investigated the method used in the valuation of unlisted companies. The small amount that has been conducted suggests that modern valuation techniques, such as discounted cash flow analysis, are not often

⁹³ *Hatrick v CIR* [1963] NZLR 641.

used in practice. However, the Courts in the United States of America and Canada have specifically accepted discounted cash flow analysis as an acceptable method in the valuation of unlisted companies.

No significant empirical research has been conducted in New Zealand on the valuation of unlisted companies. The New Zealand literature to date has shown little support for modern valuation techniques.

The bulk of empirical research on the valuation of unlisted companies has been undertaken in North America (United States of America and Canada). Two related motivations behind the research can be seen, the desire to generate an objective formula by which closely-held firms can be valued, and the goal of understanding the relative importance of differing factors in the valuation process (which will be necessary for an objective formula approach to be derived). The research has been heavily influenced by US Revenue Rulings (and similar), which suggest factors that might be of importance.

Over time, the goal of a formula approach to valuation has been rejected. The viability of this goal was always questionable given the substantial differences that exist between individual firms. Revenue rulings, and the literature in general, now reflect this reality.

North American research has shown the importance, in particular, of four key valuation factors: expert testimony, prior sales of stock, historical earnings and the book value of assets. These factors are regularly commented upon in the Courts, which suggests Judges are basing their decisions upon this information; after assessing the expert evidence. However, the possibility has not been dismissed that the Courts are simply averaging the valuations of expert witnesses. Other international research on valuation factors has been comparatively limited, with less emphasis placed on the need to determine the importance of the relative factors.

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A. Introduction

... But as a rule the price which has been the result of what has been called "the chaffer of the market" is, if not an absolutely accurate test, at least the most convenient and simple. The buyers and sellers are in fact jurors to whom an assessor can safely leave the decision . . .

(North J. in *In re Louisson deceased*)⁹⁴

The above quotation illustrates the acceptance by the Courts that, where possible, the market is the best means by which to value a company. However, with the valuation of unlisted companies often no such market is present.

Due to the absence of statutory guidelines in New Zealand for the valuation of unlisted companies, case law is of primary importance. This Chapter reviews a selection of key cases in New Zealand which have been quoted extensively in the literature.

B. Key Cases

Five cases were chosen to be reviewed in this Chapter. *In Re Monro: Turnbull v The Commissioner of Stamp Duties*⁹⁵ and *Hatrick*⁹⁶ were the key New Zealand cases that laid down the test by which the value of an unlisted company is to be obtained. *Keesing Anor v The Commissioner of Stamp Duties*⁹⁷ was an early example of the use of a present value approach by the Courts. Along with *New Zealand Insurance Company, Limited v CIR*⁹⁸ and *Hatrick*, it helped to lay down guidelines concerning the

⁹⁴ (1924) GLR 275.

⁹⁵ [1944] GLR 58.

⁹⁶ *Hatrick v CIR* [1963] NZLR 641, and Blair (1990).

⁹⁷ [1935] GLR 58.

⁹⁸ [1956] NZLR 501.

appropriateness of the asset-value method. *Holt*⁹⁹ illustrates the importance of commercial reality when implementing the test for value outlined in *Hatrick*.

I. Keesing Anor v The Commissioner of Stamp Duties¹⁰⁰

a. Background of Case

This early New Zealand Supreme Court case (1934) concerned the valuation of a deceased person's shares in a retail public company, Messrs. Hallenstine Brothers Limited. The company was closely-held, with all the shareholders, bar one, either related or connected by marriage. The firm had a capital of 230,000 £1 ordinary shares, and 105,000 £1 preference shares. A block of 45,495 ordinary shares were the subject of the dispute.

b. Facts of Case

Although the Judge in the case, Kennedy J. did not define value, he considered in detail the correct method for the valuation. In particular, he discussed the importance of the firm's asset-value: (p.58)

*What has to be assessed is the value of the property and the property in this case is shares in a company. So long as the company is a going concern, a shareholder's return will be in the form of dividends upon his shares. The asset value of the company is of importance as an element which may affect future returns by way of a dividend because, **prima facie**, the larger the asset value the greater the return that may be expected with proper management . . .*

. . . The asset value, as appearing in the balance sheet of this company, is of significance as affording some check upon the result obtained by considering the value based on earning capacity. Below a certain figure; the value otherwise calculated may not be considered as falling because it would result in a figure lower than that at which the business could be realised and the proceeds otherwise invested.

⁹⁹ [1985] 3 NZCLC 100,096 (HC), [1987] 1 NZLR 85 (CA), [1990] 3 NZLR 401 (PC).

¹⁰⁰ [1935] GLR 58.

Furthermore, Kennedy J. held that such an asset-value may need to be discounted substantially: (p.59)

... I think, when considering the possibility of liquidation, that one must take, not the government valuation, but a valuation honestly adopted by the directors, discounting it substantially to allow for a forced realisation if they honestly held the view that values must be discounted substantially on a realisation; for in such a company the views of the directors would doubtless be the views that would prevail ...

Therefore, in valuing the company, Kennedy J. ruled that earning capacity was the correct basis from which to assess the worth of the shares, unless the earning capacity was below the directors reasonably anticipated liquidation value: (p.59)

Any value of shares based on earning capacity substantially below a reasonably anticipated liquidation value is to be excluded, as bringing into play the adoption of realisation rather than the continuance of the business.

In assessing the value of the company on an earnings basis, the Judge considered the returns on ordinary shares for previous years. Both the dividends, and profits of the firm had been very low: (p.60)

The problem, then, is to estimate probable future losses, which all agree would be sustained from May, 1931 onwards, and a date at which it would be restored to a position in which ordinary dividends on an adequate scale might be expected, attempting to resolve the position at the time of death but resolving contingencies in accordance with proved fact ...

Five different opinions were expressed by expert witnesses concerning the length of the estimation period to be considered. These ranged from three to nine years in length. Kennedy J., recognising the arbitrary nature of such a decision, chose a figure between the differing views: (p.60)

... On the whole, but without having any more definite reason than is afforded by the evidence, including the estimates of the various witnesses, and adopting perhaps a figure which lies between the various views, I fix as I think at the time one would have fixed for the purposes of calculation of value, a period of seven years. Proper allowance has to be made, in considering the present value at the date of death, for lack of return during the period mentioned.

The Judge proceeded to consider the value such a company should return based on the par value. Again, the expert witnesses differed in their opinions, with the

required returns ranging between six and ten percent. Kennedy J. described why such a process was difficult: (p.61)

... The great difficulty is to get a truly comparable company and to ascertain how far market value has fluctuated in response to earnings or to dividends and to other factors. I think that in such a calculation it is fair to take, and further that a buyer and seller would take, the figure said by Mr. Burgess to have been adopted as the standard figure before the slump [ten per centum]¹⁰¹, and adopted by Mr. McInnes in his calculations, based, he said, upon stock exchange quotations at the time, namely, to treat standard earnings as eight per centum to warrant a par value ...

Therefore, the Judge deducted from the par value of the company (which equated to the asset-value subject to a revaluation of land), a discount equal to the earnings which should be made by this type of share: (p.61)

... If it be assumed that at the end of the period the company would have returned to a normal earning capacity, then the present value of an ordinary share would be one pound less a diminution for the period in question. Taking eight percent compounding interest over a period of seven years would give a value of approximately 11/8 [\$1.17 approx.]¹⁰² ...

... I am disposed to think that the value of an ordinary share at the date of death should have been taken at not exceeding 11/8 [\$1.17 approx.].

Hence, subject to a check for the correction of the value of land, Kennedy J. made the provisional decision that the share be valued at no more than 11s. 8d. (\$1.17 approx.), a value lower than the par value, £1 (\$2), and less than that of both the Commissioner, 16s. (\$1.60), and the executors of the estate, 12s. 6d. (\$1.26 approx.).

c. Analysis of Decision

This judgment emphasised the importance of an earnings basis for valuation. Notional liquidation was ruled appropriate by the Judge only where earnings were so low that the directors would have been considering the possibility. In this particular

¹⁰¹ Mr Burgess' figure was based on a calculation of the normal return required by investors in similar companies, as illustrated over a period by Messrs. Beath and Company Limited and the Mosgiel Woolen Company Limited.

¹⁰² Kennedy J. would have calculated this as \$2 (£1) less the present value of an annuity of 16 cents (1s. 7d.) over 7 years at 8 percent interest: $\$2 - (0.16 * 5.2064) = \1.17 (11s. 8d. approx.).

case, a liquidation was not deemed likely. The Judge determined the value of the firm as a going-concern was less than its asset-value, because losses were likely to be incurred into the future. The reduction to be made, was assessed as the income which would normally be earned by a comparable firm over the space of seven years. This is an early (1934) example of the use of a present value technique by the Courts. The method chosen to value the firm is interesting because it combined an asset based approach (in this case, the firms par value), with an earning based approach (the earnings which would have been expected by a comparable company).

II. In Re Monro (Deceased): Turnbull Anor v The Commissioner of Stamp Duties¹⁰³

a. Background of Case

This New Zealand Supreme Court case (1944) concerned the valuation of shares in the Canterbury Steam Shipping Company. The dispute dealt with the valuation for death duty purposes of 2,100 fully paid £5 (\$10) shares, out of a total company capital of 12,000 £5 (\$10) shares.

b. Facts of Case

Northcroft J. initially discussed the difficulty of valuing shares with no active market: (p.58)

The difficulty arises from the fact that the shares were not listed, so that there was no market price capable of being ascertained by reference to the share market. No evidence was offered to the Court of any sales of shares in the company which could form any guide to their value by what Mr Justice Denniston in In Re Alfred Louisson (1924, G.L.R. 274; 1924, N.Z.L.R. 338) referred to as "the chaffer of the market".

Northcroft J. went on to quote Smith J. from *Tremaine v Commissioner of Stamp Duties*,¹⁰⁴ another early New Zealand case, concerning how value was to be determined in such circumstances: (p.59)

¹⁰³ [1944] GLR 58.

¹⁰⁴ [1942] GLR 121, p.122.

The duty of the Court is to ascertain what sum would fairly represent the shares if they were turned into cash at the death of the deceased. If there is an actual market, the best evidence of value is usually that afforded by transactions in the market. If there is no actual market, the Court must ascertain what a man desiring to buy the shares would have had to pay for them on the day to a vendor willing to sell at a fair price but not desiring to sell: Blackwood's Executors v. Commissioner for Stamp Duties¹⁰⁵ and In re Alfred Louissou

This was built upon by Northcroft J.: (p.59)

I emphasise as being specifically referable here that where there is no actual market the Court must ascertain "what a man desiring to buy the shares would have to pay for them on the day (i.e. the date of death) to a vendor willing to sell at a fair price but not desiring to sell." In other words it is not so much an arithmetical or academic ascertainment of a figure with which the Court is concerned, as the attitude of the mind to be expected of a man desiring to buy the shares. If I may say so, without discourtesy, I think there was a tendency on the part of the accountants called for the respondent to apply themselves to an interesting problem of accountancy rather than to attune their minds to that of an hypothetical person desiring to buy the shares.

Mr Nicholls, a public accountant called as an expert witness for the respondent (Commissioner of Stamp Duties), averaged two different valuations. First, he took the mean of the companies profits before tax for the five years from 1937 to 1941 inclusive, and then deducted taxes at the 1940 rate. This figure was capitalised at 6%, giving a share value of £5 16s. 7d (\$11.67 approx.). Mr Nicholls then conducted an alternative valuation, assuming that the company did not have the liquid investments it possessed. Under this scenario, earnings were capitalised for the firms shipping fleet at 10%, resulting in a share value of £6 19s. 10d (\$13.98 approx.). The mean of these two valuations, £6 8s (\$12.80). per share, was the value arrived at by Mr Nicholls, and used by the Commissioner.

Mr Cordery was another accountant called by the respondent. He also capitalised the total firm at 6% (share value of £5 11s. 3d. (\$11.13 approx.)), and the firm without its investments at 10% (£6 9s. 1d.(\$12.91 approx.)). Additionally, Mr Cordery valued the shares on a liquidation value, with a deduction of 10% for the costs

¹⁰⁵ (1917) SR, NSW 453.

of realisation (£6 18s. (\$13.80)). Northcroft J. commented again on the respondents valuations: (p.59)

As I have already said, the methods adopted by these witnesses seemed to be somewhat arbitrary and to ignore those factors which would weigh with the hypothetical buyer. . .

It is convenient at this stage to state at least some of these factors. Death occurred in October 194ⁿ and the shares are to be valued at the date of death. At that time the war had been in progress for a year, but had in recent months taken a very unfavourable turn. The Battle of Britain was in progress and England was threatened with invasion. The Government had passed emergency regulations permitting the requisitioning of shipping and one of the ships had already been taken over, leaving two ships, one of which was subsequently taken . . .

The appellants called three expert witnesses. Mr Holland, a public accountant, compared the firm to the Northern Steamship Company. However, Northcroft J. did not accept the relevance of the comparison: (p.58)

It was submitted with some force by one of the witnesses for the appellant that the Northern Steamship Company was so like the Canterbury Steam Shipping Company as to justify a calculation of the value of these shares by reference to the market for the Northern Steamship Company's shares . . . but I was left in considerable doubt upon the fairness of the comparison owing to an absence of real knowledge of the affairs of the Northern Steamship Company beyond that which could be derived from its printed balance sheets. In some respects these gave but scant information and did not encourage me to treat the information with the confidence given to it by the witness who made the comparison.

Mr Scott, a sharebroker also called by the appellant, examined the earnings of the company, and estimated the share value when shipping was adversely affected by the war, at £2 17s. 2d (\$5.72 approx.). He stated this was the highest price a willing buyer would have been prepared to pay, given the likely return and the stability of the company. However, Northcroft J. was most impressed by, and relied on, another valuation for the appellants undertaken by Mr. Hoare: (pp.60-61)

He valued the shares upon the figure which he as a sharebroker thought would represent the price procurable from a willing buyer. He pointed out that an investor would naturally desire to know (1) what was likely to be his immediate return, (2) what were the reserves and other resources of the company for the protection of its capital, and (3) what conditions were likely to operate for and against the success of the company both during the war period and upon a longer view and discussed these

factors . . . After a detailed consideration of the earning capacity of the company, which he explained to the Court, he came to the conclusion that, as a sharebroker, he could not expect nor recommend an investor to offer a price for the shares which would have the effect of producing a yield lower than 6% upon which basis he calculated the value of £3 6s. 8d. [\$6.68 approx.] per share . . .

Accordingly, I adopt Mr. Hoare's valuation and find that the value of the shares at the date of death was £3 6s. 8d. [\$6.68 approx.] The appeal must therefore be allowed.

c. Analysis of Decision

Based upon two earlier New Zealand cases, this judgment outlined the test that where the chatter of the market was not available, shares should be valued at what a man desiring to buy the share would pay for them on the day to a vendor willing to sell at a fair price but not desiring to sell.

The Judge showed a preference for valuations of a realistic nature, based upon the test outlined. Criticism was directed at valuations undertaken by many of the accountant expert witnesses for being overly technical. They had failed to consider the relevant factors in the case (in particular, the impact of the war on the company).

III. New Zealand Insurance Company, Limited v CIR¹⁰⁶

a. Background of Case

This New Zealand Supreme Court estate duty case (1956) laid down rules for the implementation of the asset-value method for a controlling interest of shares. This was the first New Zealand Court case concerning the valuation of shares in a farming company.

The death of the owner of all the companies shares occurred at a time when wool and stock prices were falling from their peak, but were still very high. The disputed

¹⁰⁶ [1956] NZLR 501.

value of the estate centred on whether or not liquidation costs, and other deductions were appropriate with the asset-value method.

b. Facts of Case

Mr Arms (the respondent representing the Commissioner of Inland Revenue (CIR)) and Mr McLennan (the expert witness called on behalf of the applicant, Mr Mazengarb) agreed that an asset-value method was appropriate. Mr McLennan's reasoning was discussed in the judgment by Cooke J.: (p.502,14)

He first considered the earning-capacity of the company; and, approaching the matter in this way and looking back over a period of five years from the death of the deceased, has calculated that the average amount available for dividend each year would have represented 4.78 per cent. on the shareholders' funds as disclosed in the accounts and £2 7s. 6d. [\$4.76 approx.] per cent. on the shareholders' funds calculated on valuations at the date of death. In view of the low earnings, he says it would be preferable to put the company into liquidation.

After negotiation, both parties had agreed on an asset-value of £1 16s (\$3.60) per share. The dispute related to three deductions that the applicant claimed should reduce the asset-value. These were: (p.503,23-28)

- I. the costs and expenses of realization or liquidation;
- II. the increase in personal taxes on other income of the person concerned due to a liquidation dividend in excess of the nominal value of the shares;
- III. the risks of the realization and reinvestment and for a margin of profit to the purchaser.

Mr Bishop, on behalf of the CIR, claimed that the three deductions should not be incorporated into the valuation, because, "... *in the assessment of death duties, expenses of realization of assets are not normally allowed as debts*" (p.503,22-23). However, Cooke J. dismissed this argument, as "... *the deceased here did not own the assets of the company. He owned shares in it, and it is these shares that are the asset that is being valued here*" (p.503,28).

Mr Fippard, also representing the CIR, argued that the proper test to apply was whether the company had any intention to liquidate. This line of reasoning was also dismissed by Cooke J.: (p.503,33-36)

It appears to me to be somewhat illogical to take the view that in the application of the assets-value method there is to be a deduction of liquidation costs when liquidation is proposed or intended, and not when it is not. In some cases, it will not be possible to ascertain whether such a proposal or intention existed at the date at which the valuation must be made. Moreover, if such an intention were known to have then existed, it does not necessarily follow that it would have been followed into effect.

With no authority readily provided from which to make a judgment, Cooke, J. ruled that: (p.503,45-49,52-55)

I think that the underlying assets-value method is always a notional liquidation, and that, in principle, the assets-value method is directed to the ascertainment of what would be the net result to the shareholder if liquidation were carried out . . . it follows that the costs and expenses of liquidation are a proper deduction in applying that method, and I so hold.

Cooke J. justified this ruling on the grounds that it was the normal practice for the valuation of shares in partnerships in England. He cited *Greens Death Duties*, 3rd Ed., 291 as justification for his decision. The liquidation deductions allowed were: land agents' commission, legal expenses, liquidators fees, and the cost of advertisement and other disbursements. Mr Fippard claimed for the appellant that stock agents' commission was already included in the value of the stock submitted. This was accepted by Cooke J., so was not included as a liquidation deduction.

On the second point regarding the deduction for increased taxes as a result of a liquidation, the respondent accepted the deduction without conceding it was sound in principle, as the value was very minor, only 3d (3 cents approx.). Consequently, the Judge did not rule on this issue.

The Judge next considered the third deduction, the allowance for risk of realisation, and a profit margin: (p.504,35)

*In my opinion, deductions in respect of risks of realization should, in applying the asset-value method, be allowed only in cases where there is reason or ground for allowing them, such as in cases where there is a risk of difficulty or delay in realization and of consequential loss. This could happen, for instance, in connection with trading stock in such circumstances as are referred to in **Keesing v Commissioner of Stamp Duties**, [1935] G.L.R. 58 . . . I am not prepared to hold on the evidence that there was any appreciable risk that the amounts of the valuations could not have been obtained in the middle of 1951. Nor do I think there should be any*

allowance in respect of reinvestment or in respect of a margin of profit to purchasers.

Finally, Cooke J. dismissed a claim that a deduction should be made for low earnings, on the same reasoning.

c. Analysis of Decision

This case laid down the principle that if an asset-valuation method is to be used to value shares, then it must be a notional liquidation, with liquidation costs deducted. A discount for the risk of realisation and reinvestment is only to be included if there is reasonable grounds for allowing it.

IV. *Hatrick v CIR* and *Public Trustee for Hale v CIR*¹⁰⁷

a. Background of Case

Both of these cases were heard at the same time by the Court of Appeal in New Zealand. They concerned the same issue, appeals against the valuation of shares by the Commissioner of Inland Revenue for four private companies. The Commissioner accepted that no distinction should be made concerning the appropriate approach to the valuations, even though the *Hatrick* case concerned stamp duties, whereas the *Hale* case was for estate duties.

b. Facts of Case

The first issue covered was how the value of a small company should be determined. Turner and McCarthy JJ. built upon the judgment of North J., and produced the “*Hatrick*” test, which developed from New Zealand and overseas cases: (p.92)

... The test has been variously phrased, but in essence it calls for an enquiry as to the value at which a willing but not anxious vendor would sell and a willing but not anxious purchaser would buy. This, it must be

¹⁰⁷ *Hatrick v CIR* [1963] NZLR 641. This chapter quotes from a reprint in Blair (1990).

emphasised, is essentially a practical question, not to be overlaid by philosophical or legal niceties . . .

Turner and McCarthy JJ. then discussed the valuation method chosen, and its relative importance, which is less than the test itself: (p.93)

. . . There are various methods or lines of approach to this test which have been accepted over the years, and in some cases approved by the Courts; for example. the asset value method, the dividend yield method. But the method of approach must not be elevated to become the test itself: it is only an aid to ascertain the market value . . . In a large number of valuations one method of approach soon becomes apparent as being the most suitable as the primary method. Other methods then become of value merely as checks against the figure obtained through the primary method.

In choosing the method, McCarthy and Turner JJ. considered some of the important factors to be examined: (p.93)

. . . Each method of approach, and whether more than one should be applied, depends in each case on the circumstances which will include the type of business which the company conducts, its record of earnings and dividends, its likelihood of future profits, the classes of potential buyers of the particular shares, the extent of those classes, the nature of the assets of the company, and whether those assets are readily convertible to cash . . .

A number of expert witnesses were called in the case. Mr Fippard was the only witness who represented the respondent (Commissioner). For all of the valuations, Mr Fippard used the asset-value method, and allowed for notional liquidation expenses. However, unlike the other expert witnesses who used the notional liquidation method, Mr Fippard did not allow for a dividend tax deduction on the grounds that some purchasers might be able to avoid it. North J. dismissed this approach: (p.87)

. . . I do not consider it very helpful to consider, as he does, the position of purchasers who might have unusual motives in purchasing the shares. No doubt it is true to suppose that some purchasers might find it possible to mitigate the effects of the dividend tax by making gifts to grandchildren or by adopting some similar scheme, but such persons would represent a very small proportion of notional purchasers, and even in their case, I doubt very much indeed whether they would be disposed to allow the vendor to share in the relief which they hoped to obtain by carrying out such a scheme. In my opinion the right way to look at the matter is "not to exclude or include anybody in particular but to consider the matter generally". See Inland Revenue Commissioner v Crossman (1937) A.C. 26,43,44.

Additionally North J. criticised the respondent for not deducting a profit for the purchaser from the liquidation value: (p.86)

I think it must be accepted that in the case of companies with a low earning capacity it is manifest that the fair selling price would be considerably less than the value of the assets less the bare costs of liquidation. If the purpose of the purchaser was to wind up the company then surely he would expect, and have every right to expect, to make some profit on the venture, else why undertake the burden and responsibility at all?

Turner and McCarthy JJ. concurred with North J., and criticised the Commissioner's valuation: (p.94)

What the Commissioner did, as we see it, was to claim the benefits of an asset-value approach, but at the same time to disregard consequences which flow from that approach and which the taxpayer was fairly entitled to claim should have been taken into account. It is no answer in a particular case to say that no allowance should be made for taxation because in fact it is improbable that liquidation will occur. That objection is of value only in the preliminary question whether the asset-value test is suitable at all in the particular case.

The appellants relied on a valuation by Mr Cook, who also used the notional liquidation method. Mr Cook did not deduct a profit for the purchasers, but did take into account the effect of the dividend tax. Although the Judges discussed notional liquidation at length, they queried the use of the asset-value method for the valuations. Turner and McCarthy JJ. preferred the approach taken by one of the other appellants valuers, Mr Crimp: (p.95)

He approached the shares in the correct manner, telling himself that in the great majority of cases the assets-value method is not appropriate, and that the market value should generally be based on a view of a company as a going concern, break up values and the possibilities of liquidation being considered merely as other factors affecting market value. In his view the values of the particular shares were less than those claimed by the appellants (Mr Cook's values).

North J. also preferred an earnings basis for some of the valuations. He reviewed Australian cases which favoured an earnings approach, even though the Commissioner in Australia had the statutory discretion to value at, "*. . . such sum as the holder thereof would receive in the event of a company being voluntarily wound up on the date of death*" (p.87). He concluded that: (p.90)

So far as the Hatrick appeal is concerned, I am of the opinion the approach should have been to have examined the figures showing the average earning capacity of the company. There seems no reason whatever to suppose that the shareholders would willingly contemplate a liquidation and for the reasons mentioned in the Australian cases I do not think the assets-value method was in the least bit appropriate in the case of the shares in this company, though I do not wish to be understood as saying or implying that the respondent was not fully entitled also to have some regard to the value of the assets possessed by the company.

As it eventuated, all the Judges accepted the appellants case. They set the values at those argued for by the appellants, the values of Mr Cook, rather than the lower earnings based valuations they preferred.

c. Analysis of Decision

This has been the key New Zealand unlisted business valuation case for the past twenty three years. The Judges built the Hatrick test from New Zealand and overseas rulings, and further elaborated upon the determination of value. The Judges discussed extensively their preference for an earnings-based method, even though it transpired that the appellants had settled for a higher asset-based valuation. Additionally, they extended the decision of *New Zealand Insurance v CIR* by accepting the need to reduce a notional liquidation valuation for both taxation losses, and a profit to the purchaser.

V. Holt v Holt¹⁰⁸

a. Background of Case

This matrimonial property case was heard in the High Court of New Zealand, with two subsequent appeals in the New Zealand Court of Appeal and the Privy Council. The case revolved around the assessment of the value of “control” in the valuation of a share.

The company in question was a family owned farming enterprise, with a capital of \$1,000 divided into 1,000 \$1 shares. The shares were split into two classes, with 999

¹⁰⁸ [1985] 3 NZCLC 100,096 (HC), [1987] 1 NZLR 85 (CA), [1990] 3 NZLR 401 (PC).

B shares each entitled to one vote, and one A share holding 10,000 votes. All shares ranked equally on the distribution of assets in the event of a liquidation. The net assets of the farm were valued at \$800,000. The A share was owned by the husband, with the B shares held by trustees on behalf of the children from the marriage. The A share was recognised by both parties as matrimonial property, with half of it belonging to each party. The dispute related to the valuation of the A share.

Heron J., in the High Court, explained why this form of company had been established: (p.100,102)

The evidence was this was a conventional estate planning exercise at the time . . . so long as the Commissioner of Inland Revenue accepted there was no substantial difference in value between the particular classes of shares, notwithstanding the control that one class had, then the value of such shares as they improved would be enjoyed by the trust and not the husband, thereby allowing him to proceed with development plans for the farm in the knowledge that on his death substantial death duties would not have to be paid . . .

b. Facts of Case

High Court

Heron J. affirmed the *Hatrick* test, and quoted Mahon J., who summarised it in *Coleman v Myers*:¹⁰⁹

The test has been variously phrased but in essence calls for an inquiry as to the value at which a willing but not anxious vendor would sell and a willing but not anxious purchaser would buy. This it must be emphasised is essentially a practical question, not to be overlaid by philosophical or legal niceties.

The applicant (for Mrs Holt) relied on a valuation by Mr Sutherland, who assessed the value of the shares at \$150,000. He arrived at this value by calculating the present value of the various advantages the owner of the A share would receive. Heron J. did not accept this valuation: (p.100,104)

¹⁰⁹ [1977] 2 NZLR 225. This summary is an exact replica of an extract in *Hatrick*.

In my view, however, that does not sufficiently differentiate from those advantages that can be gained from normal employment and those which are exclusively associated with the perpetual right of employment I referred to earlier. The applicant in this case, however, has taken the figure as a maximum at which the A share is worth. It could possibly be a basis on which a purchaser might calculate the advantages and therefore the price he is prepared to pay, but it seems to me on its own it is not reliable in determining the true value of this share.

Mr Erber, for the respondent (Mr Holt), also criticised this approach. He argued that the benefits attributable to the husband were not from ownership of the share, but rather from his employment in the company. Mr Sutherland rebutted these comments: (pp. 100,104-100,105)

... In my opinion it is fallacious, inaccurate and misleading to say that in this case Mr Holt is in the same position as a farm manager would be. I will refer to some of the differences:

(a) Mr Holt can order his own affairs and the affairs of the company. . .

(b) Mr Holt has control over his salary and financial emoluments . . .

Mr Sutherland then proceeded to justify the premium for control which was implied by his valuation, to the approval of Heron J.: (100,105)

Mr Sutherland was able to point to actual cases where larger sums, quite unrelated to the proportion of shareholders' funds which such shares might enjoy, were paid to gain control. That is the real world of which he speaks and the climate in which I have to assess, in accordance with the principles in Hatrick, the value of this share. It is significant that in the examples he referred to figures in excess of \$100,000 were paid for "control".

The respondent relied on the evidence of Mr Hadlee, and valued the A share on the basis of a notional liquidation. Heron J. discussed, and criticised Mr Hadlee's valuation: (100,105)

Mr Hadlee, on the other hand, considers that the shares must be valued according to the traditional methods and that commercial reality must dominate the approach to valuation. He then applies the principle Hatrick applied in Johnston v Johnston 1984 3 NZFLR 65, and allows a discount for profit on the purchase price and gives the 1,000 shares in the capital of this company a value of \$632,000 or \$632. He then adds to the A share a premium for control of \$500 . . .

... One cannot talk about commercial reality without being prepared to apply it to all aspects of the reasoning, including the conclusions. As was demonstrated in the cross examination, the wife indicated through counsel a willingness to acquire the share for 20 times that figure. If I may say so, I doubt if there was any other person in the confines of this closed Court who would not have immediately done the same ...

Heron J. then proceeded to value the shares. He commented briefly upon the appropriate method:

In this case the Court is not so concerned with concepts of method of arriving at a valuation except to say that it was generally agreed that an assets value method was appropriate ...

The total company notional liquidation value of Mr Hadlee was modified upwards by Heron J.: (p.100,106)

... as far as I could see no allowance for legal and liquidation costs was included but I regard the discount of 25% on the high side. I allow for all the above deductions a figure of 20% which gives the 1,000 shares a value, ignoring differences in voting rights, of \$640,000 or \$640 each.

Keeping in mind the importance of assessing a fair value, Heron J. determined the value of the A share: (p. 100,106)

I have come to the firm view that this A share ... is worth in excess of \$150,000 ... By way of a check on such a valuation ... The value of the remaining shares would be \$490 ... or a 23% reduction for the lack of voting rights. That percentage reduction is not out of line with the reductions allowed in Johnston (supra) ... As Mr Hadlee says, the premium for control is difficult to quantify. There is no mathematical way of calculating the premium. Having regard to the net worth of this company and to the control of it, given to the holder of the A share, and allowing for the contingencies of winding up and putting a proper value on the right in perpetuity to enjoy the assets in the way provided in the articles of association, I would have reached the view that the true market value in accordance with the principle of Hatrick is in a range between \$150,000 and \$200,000. I believe that in the categories of willing but not anxious purchasers, of the kind that I have described, there is more than a real prospect those persons would pay this sum for the privilege of owning this one share and a willing but not anxious purchaser would sell at that price.

Accordingly, and having regard to the way in which the case was presented, I fix the value of this share at \$150,000.

Court of Appeal

An appeal was taken against the decision of Heron J. The arguments in the appeal were of a similar nature those presented in the High Court.

Cooke P. described the present value assessment of Mr Sutherland in more detail than Heron J.: (p.88)

This exercise was criticised on behalf of the husband and was rightly treated by the Judge as not of much help. It consisted of taking the life expectancy of the husband, who was 46 years of age at the separation, at 27 years and endeavouring to work out the net present value (as at 1984 when the calculations were made) of the right to enjoy for the rest of his life the homestead and vehicles, free of outgoings for repairs, insurance, rates telephone etc. Even free meat for life was brought in. A net present value of \$143,986 was thus arrived.

Mr Hadlee attacked the method by undertaking a similar exercise using a different interest rate, and allowing for greater tax and contingency deductions, which lead to a notional valuation of \$32,100. Moreover, Cooke P. drew attention to questions of principle in the method, including the assessment by Heron J. that it was difficult to distinguish between the advantages of the A share and normal employment. Additionally, Cooke P. discussed the time frame of Mr Sutherlands calculation: (p.88)

A further flaw is that the right of control attached to the A share is not limited to the life of the husband. It continues as long as the company remains in existence. At the most, I think, a purchaser of the A share might have some regard to the present value of the kind of benefits taken into account in the exercise, as would the vendor, but it would be far from determinative of the price they would be willing to agree upon.

However, although Cooke P. saw practical shortcomings in Mr Sutherland's method, he agreed with his general thesis, "... that control must have very substantial value" (p.88). Furthermore, McMullin J. felt that the real examples given by Mr Sutherland helped overcome any perceived shortcomings: "Whatever flaws there may be in Mr Sutherland's approach he did back it with some practical material" (p.95).

Cooke P. disagreed with the valuation which was undertaken by Mr Hadlee: "The contrasting approach put forward in the expert accountancy evidence for the husband has to be seen as unrealistic" (p.88). In the appeal, counsel for the husband

(Mr Holt) did not advocate the method of Mr Hadlee (that the A share was worth \$1150), and suggested rather that, “. . . *taking a robust approach, not unduly restricted by arithmetic niceties . . . perhaps for matrimonial property purposes the share is worth say \$10,000*” (p.89).

By contrast, McMullin J. took a softer line than Cooke P. concerning the valuation of the appellants, and in particular Mr Hadlee. He discussed Mr Hadlee’s reasoning: (p.94)

Mr Hadlee contended that the A share is not preferential as to dividend or repayment on a winding up; that the appellant is only entitled to a one thousandth of any dividend that is declared; that it is necessary to distinguish between the appellant’s roles as shareholder, director and farm manager; that any benefits which he enjoys or is likely to enjoy are associated with his position as farm manager; that he has not received any benefits or privileges as a holder of the A class share; and that he has in fact been paid only small wages.

Cooke P. criticised the use of notional liquidation in the valuation, because there was no serious possibility that the company would be liquidated. Therefore, the *Hatrick* test applied. Given that the only reason to purchase the A share was in order to obtain control, Cooke P. discussed potential purchasers: (p.89)

. . . One cannot reasonably imagine an outsider buying the A share alone or all or any of the B shares alone. To buy into a family company of this kind would be to invite conflict. The only potential buyers to be postulated realistically in 1981 were the trustees of the family trust or some outsider acquiring all the shares, A and B, thus having the farm or the investment represented by it at complete disposal.

However, Somers J. believed that although the A share would be of little value to external purchasers without the B shares, it held special value to the trustees, and it was from here that it derived its worth: (p.97)

The A share has that special value for a number of reasons. First, while the trustees own all but one of the shares in the company their value cannot be fully realised without control or ownership of the A share . . . Secondly the exercise of control of the management of the company is obviously difficult and probably expensive. Thirdly, they run the risk that the husband may remarry and have further children and in some way perpetuate their present position or at least want more for the A share than as a willing but not anxious seller he might at the present time be willing to accept.

Cooke P. discussed case law concerning the importance of the control of firms. He made the following statement, which can be seen as criticising the approach taken by the appellants: (p.90)

Among some accountants and lawyers, on or off the Bench, there seems to be a persistent disinclination to accept, or at any rate act on, the principle of such decisions. It may reflect a yearning for the certainty of rules of thumb, or a sense that shares and other items of property must have an intrinsic value capable of being revealed by some formula. The latter, however, is an illusion. Money value is simply what is obtainable in an actual or notional market. In some case, such as shares quoted on the stock exchange, it is easily ascertained. At the other extreme are cases where the valuer can do little more than identify the factors likely to influence the parties in bargaining for a fair price in a friendly negotiation, and then arrive at a discretionary judgment.

Cooke P. rejected the appeal, with the comment that the valuation was still on the low side: (p.91)

It may be noted that in selecting a figure at the lower end of his range the Judge in effect decided on rather less than one quarter of value of the company's net asset backing at the material date. Without proposing any invariable rule, I should have thought 20% to 25% of the market value of a company's assets could well represent the fair value of control. At all events I do not think that Heron J's approach can be faulted and would uphold his decision.

McMullin J. took the approach that no right or wrong answer existed in the valuation of shares. He also dismissed the appeal, but unlike Cooke P., considered the valuation on the high side: (p.95)

The valuation of shares in a family company is notoriously difficult. If the valuation of the appellant's share had been submitted to five valuers it would not be unlikely that five different answers would have resulted . . . Any answer between \$50,000 and \$150,000 on the material before him might have been given and, once given, be difficult to set aside on appeal. While I think the figure of \$150,000 is at the very top level which might be awarded, I cannot say that the Judge on the material before him was not entitled to reach it . . .

Somers J. also concluded that the appeal should be rejected. Like, McMullin J. he felt that the valuation of Heron J. was on the high side, but this did not invalidate the judgment: (p.98)

I confess that I have found this a difficult case. There is much to be said for the view that the husband could hardly expect from a stranger any large sum, perhaps not more than \$20,000 to \$30,000 at the outside, something in the order of \$50,000 to \$75,000 might be a fair price. But in the end I have reached the view that the Judge's figure should not be disturbed . . . It is a tenable view that to pay \$150,000 in order to receive a net sum of \$490,000 (\$640,000 minus \$150,000) is, on its face, good business when the existing value of the B shares without control must be substantially less than that sum.

Privy Council

Lord Templeman upheld the applicability of the *Hatrick* test, even though he could see few potential purchasers. The appeal proceeded on the argument by the husband that the A share offered no better position than a farm manager paid reasonable remuneration, and that the share was worth \$10,000 at best. This view was dismissed by Lord Templeman:¹¹⁰ (p.403)

The analogy between the A shareholder and farm manager is false. The A shareholder is more nearly in the position of a tenant for life impeachable for waste. He can appoint himself sole director and in that capacity take possession of the farm estate, the farmhouse, the livestock, the machinery and equipment and all the other assets of the company. He can occupy the farmhouse as a family home, he can run the estate as he sees fit. Unlike a farming manager he cannot be dismissed and is not obliged to consult or to take instructions from anyone. He is as much the squire of Woodah farm estate as a tenant for life and can even cause the estate to be sold if he likes . . .

Moreover the A shareholder possesses two advantages which are not enjoyed by a farm manager or a tenant for life. The first advantage is that the A shareholder can create a further tenant for life by transmitting the A share for example to his son if his son wishes to farm or to a purchaser for whom farming is attractive. The rights attached to the A share endure so long as the company endures unless the A shareholder alters the articles. The second advantage is that the B shareholder can obtain nothing without the cooperation of the A shareholder.

The law lords concluded that the appeal should be dismissed: (Lord Templeman, p.405)

¹¹⁰ Lord Templeman also delivered the judgment for, Lord Keith of Kinkel, Lord Griffiths, Lord Ackner and Lord Lowry.

Their Lordships would on well-established principles not interfere with concurrent findings regarding the value of the A shares. Having regard to the rights attached to the A share and the B shares respectively and to the necessary postulate of the exercise of a willing but not anxious seller and a willing but not anxious buyer, their Lordships see no ground for disturbing the order made by Heron J and affirmed in the Court of Appeal and will therefore humbly advise Her Majesty that this appeal should be dismissed . . .

c. Analysis of Decision

The *Holt case* reaffirmed the *Hatrick* test is applicable, even when it is difficult to conceive of a sale occurring. It was emphasised that the *Hatrick* test is a practical question.

The valuation by Mr Hadlee for the respondent claimed to follow *Hatrick* principles by using the method from that case (notional liquidation less a discount for profit to the purchaser). However, because it failed to consider commercial reality in assessing the control of the A share, it resulted in an unrealistic valuation.

The applicant utilised a valuation by Mr Sutherland who discounted the benefits attributable to the A shareholder. This method was criticised for failing to distinguish sufficiently between the benefits normally received by a farm manager, and the holder of the A share. Additionally, Mr Hadlee criticised the assumptions made and produced an alternative valuation using the same method which was considerably lower. The time period imputed into the valuation was also queried.

Strong weight was placed by Heron J. on the statement by Mr Sutherland concerning cases he had dealt with which illustrated the value for control. Heron J. valued the shares by considering this, and other factors, at Mr Sutherland's figure (which was based on a DCF analysis). Both appeals were dismissed, with the judgment of Heron J. confirmed as acceptable.

C. Chapter Summary

The New Zealand Courts (*In re Monro: Turnbull v The Commissioner of Stamp Duties*¹¹¹ and *Hatrick*¹¹²) have agreed with overseas authorities that the correct method by which to value companies, when an active market is not available, is via, “. . . an enquiry as to the value at which a willing but not anxious vendor would sell and a willing but not anxious purchaser would buy” (*Hatrick*, p.92). Throughout the cases reviewed in this Chapter, the Courts have emphasised the need for realism, with the value obtained reflective of the *Hatrick* test, rather than the result of an arithmetic exercise. This is best illustrated in *Holt*,¹¹³ where a valuation that claimed to follow the principles of *Hatrick*, was rejected because of the unrealistic value it placed on a controlling interest. *Hatrick* also suggested general factors which should be considered when applying the *Hatrick* test.

The Courts have also provided guidelines as to the correct method for a given business valuation case. Preference has been shown for an earnings approach to valuation (*Keesing v Commissioner of Stamp Duties*),¹¹⁴ with an assets approach only suitable where a liquidation is likely (*Keesing v Commissioner of Stamp Duties*). When an assets approach to valuation is used, it is necessarily the notional liquidation method (*New Zealand Insurance Company, Limited v CIR*).¹¹⁵ Discounts for the risks of realisation and reinvestment may be appropriate (*New Zealand Insurance Company, Limited v CIR*). Additionally, deductions for a profit to the purchaser and taxation losses are accepted practice (*Holt*).

In the early case of *Keesing v The Commissioner of Stamp Duties* present value concepts were utilised in the judgment. One of the expert witnesses in *Holt* utilised a DCF analysis which was criticised. However, Heron J. still valued the shares in

¹¹¹ [1944] GLR 58.

¹¹² *Hatrick v CIR* [1963] NZLR 641, and Blair (1990).

¹¹³ [1985] 3 NZCLC 100,096 (HC), [1987] 1 NZLR 85 (CA), [1990] 3 NZLR 401 (PC).

¹¹⁴ [1935] GLR 58.

¹¹⁵ [1956] NZLR 501.

accordance with this valuation. Nevertheless, neither of these key cases laid down any clear judgments concerning the acceptability of present value techniques.

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A. Introduction

There would be few today that would dispute that empirical research in accounting is of central importance. Yet it is interesting to note that, as Mattessich (1980) points out, this centrality is of recent origin. It is only in the 1970s that this shift in accounting research gained centre stage. Prior to this time "normative" thinking and theorizing was paramount.

Laughlin (1995, p.63)

It is the intention of this thesis is to investigate the valuation of unlisted companies in New Zealand. The advantages and limitations inherent in any method determines the scope and depth of the research undertaken. By investigating prior research in the field, an evaluation of the methods available is possible.

This Chapter discusses the need for empirical research on the valuation of unlisted companies in New Zealand. This is followed by an evaluation of the methods available, and a justification of the choice of research method made. Next, the scope of the research is determined, followed by a description of the data collection process. The way in which the data is categorised is then discussed. Finally, a brief summary concludes the Chapter.

B. Need For Empirical Research

As was discussed in Chapter 4, very little empirical research has been undertaken on the valuation of unlisted companies in New Zealand. Journal articles and texts have espoused particular theories concerning the suitable valuation method, and sometimes selectively considered relevant Court decisions and case examples. However, no significant empirical study has been conducted that has investigated what is occurring in practice.

With the exception of the North American research into valuation factors, internationally, there is also a dearth of empirical studies on the valuation of unlisted

companies. Kantor and Pike (1987, p.221) discussed the situation in North America, where the market for listed companies is heavily researched, in sharp contrast to the unlisted market:

Academic neglect is, we suggest, the consequence of an inadequate methodology and the absence of a reliable data base. Lawson (1980) sums up the situation well: 'there is no escape from the fact that financial theory is not yet able to boast of a fundamentalist multi-period model that can generate tolerable valuations for unquoted companies'. In short it is far easier to concentrate on the relatively small proportion of companies which have listing status, using well-tested methodologies and readily available published data sources.

Therefore, a lack of theory and reliable data sources can be viewed as having hamstrung research in the field. Unlike in the United States of America (US) and Canada, there is no professional body of unlisted company valuers in New Zealand from which to draw information, which further limits the data sources available.

Without empirical research, it is impossible to determine with any degree of certainty whether theory developed in the field is being followed. However, before conducting empirical research it is important that the theoretical issues are understood. Consequently, Chapters 3 and 4 of this thesis were vitally important: (Laughlin, 1995, p.65)

An inevitable temptation when undertaking empirical research is to launch into data collection assuming that the theoretical and methodological problems will naturally sort themselves out as the work proceeds. To some degree this may well be the case and there will be little damage caused through this approach. However, there is a certain advantage and importance of making deliberate choices on these matters prior to undertaking any study. The reason quite simply is that all empirical research will be partial, despite any truth claims to the contrary, and thus it would be better to be clear about the biases and exclusions before launching into the empirical detail.

The next Section considers the empirical research methods which have been used internationally, and discusses their potential applicability to New Zealand.

C. Prior Empirical Research Methods

Four empirical methods have been used in prior research on the valuation of unlisted companies: legal review, survey, case study, and experiment. These will now be discussed.

I. Legal Review

Traditionally, legal research has interpreted and analysed Court judgments and the precedents set. An early example of this method for the valuation of unlisted companies was provided by Rice (1950), who evaluated a number of North American Court decisions.¹¹⁶ This is still an accepted approach and is used extensively. A recent United Kingdom (UK) example is provided by Gregory and Hicks (1995).

However, quantitative techniques for the analysis of Court data are becoming more common. Martin (1975), Kantor (1984) and Angelini and Martin (1989) calculated simple statistics on the number of cases that discussed particular valuation factors. These statistics augmented their more traditional legal analysis to assist in assessing what was important to the North American Courts when valuing shares. This type of research is descriptive, as defined by Emory and Cooper (1991, p.161):

Descriptive studies are those used to describe phenomena associated with a subject population or to estimate proportions of the population that have certain characteristics.

Furthermore, unlisted business valuation researchers have used advanced empirical tests to analyse Court data (for example, Englebrecht (1976)).¹¹⁷ This research is more causal in nature: (Emory and Cooper, p.161)

Causal studies seek to determine the effect that a variable(s) has on another (or others) or why certain outcomes are obtained. The concept of causality is grounded in the logic of hypothesis testing which, in turn,

¹¹⁶ A more thorough discussion of Rice's work was provided in Chapter 4.

¹¹⁷ For example, regression analysis and factor analysis.

produces inductive conclusions. Such conclusions are probabilistic and thus can never be demonstrated with certainty.

A tax study by Whittington and Whittenburg (1980, p.411) discussed the validity of using quantitative techniques on Court data:

Currently, most tax research consists of case-by-case interpretation of legal doctrines by the researcher. The application of quantitative techniques to the development of models for the judicial process is relatively new to the accounting literature. However, an examination of research on judicial issues and the judicial process in other disciplines reveals several other applicable methodologies. Social scientists have employed such quantitative techniques as factor analysis, regression analysis, and multiple discriminant analysis in the study of the effects of external and internal influences on judicial decisions [Pritchett, 1969] . . .

More recently, legal researchers have utilized quantitative techniques for modelling judicial decisions from case fact patterns [Haar et al., 1977]. Relying upon the doctrine of stare decisis (i.e., let the decision stand), this type of analysis attempts to model judicial decisions based upon input factors. The resulting factors and factor weights are, of course, affected by the external and internal influences which have been studied by the social scientists. Nevertheless, this analysis results in pragmatic models which appear to be particularly appropriate to the research of tax issues.

Rarely is an attempt made to define these quantitative approaches to legal analysis. They can be viewed however, as a form of content analysis. Abbott and Monsen (1979, p.504) define content analysis as:

. . . a technique for gathering data that consists of codifying qualitative information in anecdotal and literary form into categories in order to derive quantitative scales of varying levels of complexity.

Content analysis can range in complexity from a simple count of the number of instances of a particular event, to more judgmental assessments of content (Gray, Kouhy, and Lavers, 1995). It is important in a content analysis that the data is “objective”, “systematic”, and “reliable” (Krippendorff, 1990). Madeo (1979, p.551), who statistically analysed Tax Court cases in the US, discussed the reliability of Court data:

It is possible that the Tax Court has based its decisions on some factors not mentioned in either the regulations or the IRS Audit Guidelines. One such factor is the skill and expertise of the attorneys involved in representing the positions of the government and the taxpayer corporation. Additionally, the study was based on the printed opinions of Tax Court

judges. These opinions are, in effect, justifications for the decisions of the court and may select from available materials those factors which support the decision.

Additionally, the importance of “shared meanings” is emphasised by Gray, Kouhy, and Lavens (1995, p.247). On the surface this would not appear to be a problem in the business valuation field, where it is possible to quickly interpret a given valuation method or factor based upon the theoretical literature. However, Judges may not be familiar with normal business valuation terms. Their judgments may report and weight various methods and factors in a different manner to that prescribed in the valuation literature. Reliance on these judgments is a limitation of the legal review method.

One of the questions that is raised with legal research is the extent to which the results can be generalised beyond the Courts. Madeo (1979, p.551) discussed the situation after researching Tax Court decisions:

The study was also limited in that it was based on cases tried in Court (the only available published data). There are many opportunities prior to a court appearance for the parties to compromise. Taxpayers with weak cases may be more likely to compromise than to proceed to court. On the other hand, such taxpayers may feel that they will have a more sympathetic hearing from a judge than from IRS representatives. Given the lack of available data one can only speculate as to the possible bias introduced by limiting the study to cases tried in the court

However, legal studies can provide the basis from which other methods can be used to back up the findings. For example, Pike, Sharp and Kantor (1988) utilised information provided by six accounting firms to confirm the results of earlier Court research.¹¹⁸

A major advantage of legal research is the breadth and availability of the data source. In New Zealand, where there has been no previous empirical research on the valuation of unlisted companies, such a data source provides an excellent basis from which research can develop. The current lack of knowledge makes New Zealand ideally suited to a descriptive study. Descriptive legal research would provide an initial understanding of business valuation in the Courts. From here, further studies could

¹¹⁸ This was discussed in more detail in Chapter 4.

extend knowledge beyond the Courts. Additionally, causative models might then be investigated.

II. Survey

The survey method is a tool which allows the investigation of a sample of the population. Examples of its use in the unlisted company valuation field include the work of Bosland (1963), Kantor and Pike (1987a, 1987b), and Keane (1992). Bosland (1963) surveyed the participants of Tax Court cases, whereas Kantor and Pike (1987a, 1987b) surveyed members of the Canadian Institute of Business Valuators (CICBV) and staff of Revenue Canada. Both of these researchers used mail surveys. Kantor and Pike (1987b) backed up their findings with in-depth personal interviews. Keane (1992) was another who used personal interviews, sampling accounting firms in the Glasgow area. The logistics of using personal interviews restricted Keane (1992) to researching only sixteen accounting firms. Keane (1992, p.9) discussed the firms he interviewed, and the method used:

... 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 postal questionnaire approach was adopted, and this limited the size of the sample ... 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 the smaller firms to make an extended sample of significant value.

The major hurdle to overcome if the survey method was to be used in New Zealand would be the selection of the sample, and the chosen population from which it derived. Due to the absence of a professional business valuers institute, and a lack of descriptive research in the field, it is not known with any accuracy who are valuing unlisted companies in New Zealand (therefore a sample chosen along the lines of Kantor and Pike (1987a, 1987b) would not be an option). It would be possible to follow the lead of Keane (1992) and survey a group of accounting firms in New Zealand. However, although Keane's (1992) sample may be reflective of accounting practice in Scotland, it may not be consistent with other business valuers (for example, investment bankers). The possibility must exist in New Zealand that accounting firms are not major

players in the unlisted company valuation field. Hence, a study which concentrated on this population may not be reflective of the bulk of unlisted company valuation practice.

The method Bosland (1963) used, was to survey participants in Tax Court cases. Like legal research this approach was limited to Court valuations, not the total population of business valuations. This method can be seen as an indirect means by which to obtain information on Court cases, as opposed to going directly to the judgment. An advantage is that the information required can be specifically requested from the participants, whereas legal research is limited to that data which is given in the judgment. However, the traditional disadvantages of the survey method might offset this advantage. These disadvantages include non response error, response error, and cost (Emory and Cooper, 1991). Additionally, it would be expensive and time consuming to track down participants from Courts cases.

Unlike the legal research method which is longitudinal, surveys are by their very nature cross sectional. This means that the results only reflect a brief period of time. Emory and Cooper (1991, p.141) state that: *"The advantage of a longitudinal study is that it can track changes that occur over time. Indeed many research questions may be answered after extended observation"*.

III. Case Study

Pike, Sharp and Kantor (1988)¹¹⁹ undertook empirical research that can be viewed as coming under the case study method. Their research was causative in nature, with the primary goal being to determine the importance of variables in an unlisted company valuation. Their selection of only seven firms (270 valuations) allowed an in-depth study of the valuation process. This form of research is useful to understand the process in-depth, however, like the research of Keane, the small sample chosen may not be reflective of the general population. Additionally, Pike, Sharp and Kantor (1988) had the advantage of an existing professional business valuation body, and previous North American research from which to build their work. In New Zealand, research along

¹¹⁹ This research was outlined in Chapter 4.

these lines would be limited mainly to the investigation of accounting firms, because of the lack of information on who is valuing unlisted companies.

IV. Experiment

Kantor and Pike (1987b) also used a card ranking exercise to back up the findings of their initial mail survey (p.225). They described the experiment:

Participants were presented with three decks of cards, each deck consisting of eight cards, and each card representing a fictitious company for valuation. Their task was to rank the cards within each deck according to value. Each card described a company in terms of seven of the 17 variables, using one of the levels specified for each variable . . . Cards within a particular deck had the same seven variables with varying levels. Of the 17 variables, three were repeated in more than one deck of cards.

Similarly with the case study approach, this form of research provides more detail in greater depth about the unlisted company valuation process. As such, it is not considered suitable for the first stage of research in New Zealand. Kantor and Pike (1987b) correctly used the method as a back up for their previous findings.

D. Research Method Chosen

A decision was made to utilise the legal review method, including a simple count of the key issues concerning the valuation of unlisted companies. This method has the following advantages:

- I. *Breadth:* A substantial number of Court judgments are available on the valuation of unlisted companies, covering much of the country. The lack of information on who is performing business valuations prevents the use of the survey method, as the sample would be extremely difficult to define.
- II. *Relevance:* Decisions in the Courts impact directly on business valuation practice, particularly for expert witnesses presenting valuation assessments to the Courts. Additionally, it can be determined if the Courts are correctly following valuation theory.
- III. *Database:* This form of legal research will provide an initial database from which further research can proceed. A significant sample of New Zealand

business valuers' methods will have been recorded, allowing later research to investigate them in more depth.

- IV. *Longitudinal*: An extended period of time can be examined; possibly indicating any trends that may be occurring in valuation practice and theory.
- V. *Cost and Logistics*: Court data provides a cheap, untapped resource for unlisted company research. Court judgments are readily available, and easily obtained.

E. Scope

The time period over which the legal review was conducted, was necessarily an arbitrary choice. Martin (1975), Kantor (1984) and Angelini and Martin (1989) chose time frames of 21.5, 44, and 15 years respectively. These researchers restricted their case selection to Tax Court decisions.

A 19 year time span from the inception of the Matrimonial Property Act of 1976 until 1995 was deemed to be suitable. The Matrimonial Property Act has had a large impact on business valuations as the parties in Court cases will often be unable to come to agreement (Blair, 1990). This time frame is manageable in length; long enough to allow trends to be detected, yet recent enough to be relevant.

New Zealand is considerably smaller than the US, with relatively fewer cases reaching the Courts. To maximise the population over the 19 year period, all types of unlisted company valuation cases were considered. There was no particular reason why this thesis should have been restricted to one type of judgment on the valuation of unlisted companies (for example, tax, as per the North American researchers), as even if there were differences between the types of cases (for example, matrimonial property and tax), such differences could then be investigated and quantified.

F. Data Collection

Secondary data sources, unlike primary data sources, are not originally obtained for the purpose of the research (Emory and Cooper, 1991). Examples of secondary data sources include: published and unpublished studies, company databases and annual company reports. Court judgments are a secondary data source, because they are not primarily delivered for any specific piece of research. Rather, they represent a record of a particular event, a given Court case.

All unlisted valuation cases over the designated period, from 1976 to 1995, were searched for. This was achieved by three methods: computer search, references from New Zealand literature, and cases cited in the judgments obtained. The computer search was the primary method, with few cases coming from the literature. This provided the basic database, which was extended via Court citations of other judgments. The computer search is now discussed in more detail.

Emory and Cooper (1991) described the advantages and disadvantages of a computer search over a manual search. These are summarised in Table 19. Ultimately though, after discussing the disadvantages, Emory and Cooper (1991, p.297) concluded that: *“The speed, flexibility, and coverage provided by computerized searches usually far outweigh these disadvantages”*.

Table 19: Assessment of Computerised Searches (Emory and Cooper, 1991, pp.297,299)

<i>Advantages</i>	<i>Disadvantages</i>
Speed	Key words needed
Flexibility	Excessive sources often found
More current material	Limited number of years covered

Three CD-ROM computer search systems were used, *Linx*, *Briefcase*, and the *New Zealand Law Reports* on-line. *Linx* is a database of the Auckland, Canterbury and Wellington District Law Societies. It is comprehensive, but not complete. Most High Court and Court of Appeal cases since 1983 are included. Additionally, permission was granted by the Canterbury District Law Society to search Family and District Court cases since 1991. *Briefcase* is derived from a number of law journals and reference

materials. *Briefcase* covers High Court, Court of Appeal, and some lower Court decisions from 1986. It is not as comprehensive as *Linx*, but still contains a number of cases not included in *Linx*. Unlike *Linx* and *Briefcase*, the *New Zealand Law Reports* on-line is full text (not just abstracts). However, it only includes material published in the *New Zealand Law Reports* (NZLR). The *New Zealand Law Reports* on-line was the only electronic database which covered the entire 19 years investigated.

All three CD-ROMs offered the advantages of speed, flexibility, and current material. It is doubtful if an adequate coverage of the cases could have been achieved without these search tools, as, in particular, it would have been virtually impossible to find many of the unreported judgments obtained. Various key words were imputed, which resulted in a large number of abstracts that had to be sifted through. Because *Briefcase* and *Linx* are not full text, a percentage of the cases obtained from the abstracts found were unsuitable. The disadvantage suggested by Emory and Cooper (1991) of a limited number of years covered, was a limitation of the computer search undertaken. Only the *New Zealand Law Reports* provided coverage of the entire period. Even after the computer search was supplemented with cases from the literature, and citations from the Court judgments, the bulk of cases were from more recent periods. It is unlikely that all cases available over the 19 year period were found. An unfortunate reality of any search that some items may be missed. This is not considered a serious limitation.

All the cases found in the prior searches were collected (over 150 cases, only 64 of which were suitable). Reported cases were photocopied from the appropriate law reports. Unreported cases were obtained in two ways. Judgments Unlimited, a commercial firm in Wellington, provided the unreported High Court and Court of Appeal decisions. The Canterbury District Law Society granted the unreported Family and District Court decisions on the following conditions from the Registrar of the Canterbury District Courts, Mr Twidle:

- I. Complete confidentiality as to the names and identities of the parties or businesses operated is maintained;
- II. no other person (than the author) shall have access to the decisions;
- III. no communication shall be made with any party, business or professional person associated with the case;

IV. the information used is limited only to the method of valuation.

G. Database Information

It was important that the data was categorised to make it more manageable. Three groupings were necessary to extract the maximum amount of information. These groupings are referred to in Chapter 7 (the results) of this thesis.

I. Database One

Database One is comprised of only those Court judgments where valuation methods were advocated by expert witnesses. This database includes a total of 51 cases. In these 51 judgments there were 119 valuations by expert witnesses.

II. Database Two

Database Two comprises of 51 cases where judges made clear rulings on the valuation of companies.¹²⁰ This database differs from Database One in two important ways:

- I. It includes judgments where valuation experts did not advocate valuation methods.
- II. It excludes judgments where there was no clear ruling on the outcome.

III. Database Three

This includes all of the usable cases where unlisted companies were valued. It combines Database One and Database Two and also includes some cases where Judges did not make a clear decision and expert witnesses did not advocate particular methods. This database has a total of 64 cases.

¹²⁰ It is a coincidence that Database One and Database Two are the same size.

H. Chapter Summary

Little empirical research has been undertaken on the valuation of unlisted companies in New Zealand. This Chapter has justified the research method chosen in this thesis to research unlisted companies in New Zealand.

An investigation of the research methods used in overseas literature, indicated that neither the survey, case study nor experiment methods are presently suitable. By contrast, a legal review will provide a broad descriptive data base from which further research can develop. A simple analytical count will be used, providing valuable statistics on the practices of a large sample of New Zealand valuers and the Courts.

A nineteen year period, from the inception of the Matrimonial Property Act (1976) has been deemed suitable. Cases were searched for, and found, predominantly through the use of computer databases. All cases found were collected, and have been categorised into three databases.

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A. Introduction

Among some accountants and lawyers, on or off the Bench, there seems to be a persistent disinclination to accept, or at any rate act on, the principle of such decisions. It may reflect a yearning for the certainty of rules of thumb, or a sense that shares and other items of property must have an intrinsic value capable of being revealed by some formula. The latter, however, is an illusion. Money value is simply what is obtainable in an actual or notional market. In some case, such as shares quoted on the stock exchange, it is easily ascertained. At the other extreme are cases where the valuer can do little more than identify the factors likely to influence the parties in bargaining for a fair price in a friendly negotiation, and then arrive at a discretionary judgment.

(Cooke P. in *Holt v Holt*)¹²¹

This Chapter presents the results of this thesis. These results provide the first significant empirical research into the valuation of unlisted companies in New Zealand. The Databases from which the information in this Chapter is derived, were discussed in Chapter 6. The research method utilised enabled the consideration of a wide range of cases, with more specific information drawn out as required.

The results have been split into four Sections which relate to the previous Chapters. Section B discusses a variety of background information (relates to Chapters 2 and 5). Section C presents the results regarding the valuation method (Chapter 3). Section D analyses the nature of the decisions made in the Courts (Chapter 4). Section E considers the valuation factors used in the New Zealand Courts (Chapter 4). Finally, a brief summary of this Chapter is provided.

B. Background Information

This Section discusses the results concerning many of the issues presented in Chapter 2 of this thesis. It is divided into six Sub-Sections: definition of value, expert

¹²¹ [1987] 1 NZLR 85 (CA).

witnesses, types of cases, appeals to higher Courts, industry influence, and other variables.

I. Definition of Value

Chapter 5 discussed the *Hatrick*¹²² case, which included what has come to be known as the *Hatrick* test: (p.92)

... The test has been variously phrased, but in essence it calls for an enquiry as to the value at which a willing but not anxious vendor would sell and a willing but not anxious purchaser would buy. This, it must be emphasised, is essentially a practical question, not to be overlaid by philosophical or legal niceties ...

Chapter 2 showed this is an accepted international definition of value. In every case where the Judge discussed the meaning of value there was a reference to the *Hatrick* test, or an equivalent. From Database Three, 27 out of 64 (42.2%) cases included a citation of the *Hatrick* case. *Hatrick* was the most quoted case in the New Zealand Courts for the valuation of unlisted companies.

Occasionally commercial reality as represented by the *Hatrick* test was put aside by the Courts in favour of an equitable outcome between the parties. This occurred in two types of case, matrimonial property disputes, and oppression cases.

Section C-III-b discusses the matrimonial property cases where the notional liquidation method was abandoned in favour of a more equitable outcome between the parties, for example, in *Page v Page*.¹²³ These cases depart from the *Hatrick* test, because it is accepted commercial practice that the valuation of a firm as a non-going-concern necessitates the use of the notional liquidation method (see Chapters 3 and 5).

Another type of case where it has been suggested the *Hatrick*¹²⁴ test may be inappropriate, is with compulsory acquisitions under s209 of the Companies Act. In *Lusk*

¹²² *Hatrick v CIR* [1963] NZLR 641. This chapter quotes from a reprint in Blair (1990).

¹²³ (1981) 5 MPC 114.

¹²⁴ *Hatrick v CIR* [1963] NZLR 641.

*v Archive Security Limited*¹²⁵ Gallen J. argued that an additional factor should be considered in a case involving a compulsory acquisition: (p.66,993)

Where such a situation arises, then I think it is inadequate to approach the figure on the basis of what the disinterested investor might be prepared to put in for the purchase of an interest designed to produce monetary returns. When a person is compulsorily deprived of an asset in circumstances such as these, I think it not unreasonable to approach the matter on the basis that the person or persons who are losing the asset should be compensated for the loss of their reasonable expectations bearing in mind the basis on which they entered into the investment.

This argument contradicts the *Hatrick*¹²⁶ test where the valuation of shares does not involve considering the parties losing their assets. Compensation for the loss of reasonable expectations is not included in the *Hatrick* test.

However, these cases are the exceptions rather than the norms. Generally, the Courts accepted commercial reality as the basis for valuing unlisted companies. The advantage of this view, is it allows business valuation experts to approach the assessment to be undertaken from the same basis. They do not require specialist knowledge of the particular law under which the valuation is required (for example, negligence).

II. Expert Witnesses

From Database One, information on expert witnesses in the New Zealand Courts has been compiled. One of the most interesting findings, is that 53 out of 119 (44.5%) of these valuations were conducted by expert witnesses involved in more than one case in the sample. The methods used by these expert witnesses are presented in Table 20.

¹²⁵ (1991) 5 NZCLC 66,979.

¹²⁶ *Hatrick v CIR* [1963] NZLR 641.

Table 20: Valuation methods used by particular expert witnesses.

Expert Witness	CME	Liq	NA	NA+G	DY	DCF	CAPM	NFCF	Unclear	No.
Mr Hagen	7	4			1		1			13
Mr Ross		5							1	6
Mr Hadlee		5								5
Mr Laing	2	1						1		4
Mr Moore	2		1		1					4
Mr Pope	2				1				1	4
Mr Frankham		2				1				3
Mr Anderson	1			1						2
Mr Chapman		2								2
Mr Dobson	2									2
Mr Ellis		2								2
Mr Good			2							2
Mr Kensington			1						1	2
Mr Somerville	1					1				2

Key: CME = capitalised maintainable earnings, Liq = notional liquidation, NA = net assets, NA+G = net assets plus goodwill, DY = dividend yield, DCF = discounted cash flow analysis, CAPM = capital asset pricing model, NFCF = net free cash flows, No. = total number of valuations.

It is clear that Mr Hagen undertook the most valuations for the sample considered. He has shown a preference for using capitalised maintainable earnings (CME) to value going-concern companies, and notional liquidation value for the others. By contrast, Mr Hadlee and Mr Ross on the surface, prefer the use of the notional liquidation method. However, caution must be taken in interpreting these results, as it is possible that most of the cases considered by these valuers (Mr Hagen and Mr Ross) were for low earning or non-going-concern companies.¹²⁷

Chapter 2 questioned what type of qualifications expert witnesses might have in New Zealand. In every case where an expert witness was called to value the shares, and information was given about the expert witness in the judgment, the expert witness was an accountant. In a few instances other experts were called to value assets of the

¹²⁷ Although, it will be remembered from the *Holt v Holt* [1985] 3 NZCLC 100,096 case discussed in Chapter 5 that Mr Hadlee used notional liquidation to value a share in a farm which was a going-concern.

company, but only accountants valued the total value of the shares. However, some of these accountants were also qualified as registered valuers.

The Courts frequently alluded to the experience and reputation of expert witnesses. This is clearly an important factor which influences Judges decisions. However, the Courts did not state any preference for particular expert witness qualifications.

III. Types of Cases

Table 21 displays the types of Court cases that necessitated the valuation of unlisted companies in New Zealand (64 relevant cases from Database Three).

Table 21: Types of valuation cases in 64 New Zealand Court decisions from 1976-1995

Type	Number of Cases	Percentage of Cases
Matrimonial Property	47	73.4%
Oppression, s204	10	15.6%
Negligence	6	9.4%
Estate	1	1.6%

Four basic types of cases were found. The matrimonial property disputes were all cases concerning divorce settlements. Oppression cases were those where shareholders (normally minorities) considered they were being oppressed by the other shareholders. Negligence cases were those where expert witnesses were charged with having negligently performed their duties. The only estate case concerned a dispute over the value of a property upon the death of the owner.

It is readily apparent that matrimonial property disputes account for most of these cases (73.4%). Interestingly, estate cases are very uncommon in New Zealand, perhaps because of the absence of estate duties. The negligence cases all involved the transfer of shares on the open market, and hence were open in nature.¹²⁸ Four of the oppression cases were also of an open nature. The rest of the cases were notional valuations (84.4%). No significant trends were found concerning any distinction

¹²⁸ The distinction between open and notional valuations was discussed in Chapter 2.

between open and notional valuations. This is similar to the findings of Kantor and Pike (1987a, and 1987b).¹²⁹

IV. Appeals to Higher Courts

Occasionally, dissatisfied parties after a Court judgment on the valuation of unlisted companies, appealed to a higher Court. This Sub-Section discusses these Court appeals.

Ten Court appeals were found (from Database Three) that related specifically to the valuation method. Of these ten appeals, only two succeeded, *Crichton v Crichton*¹³⁰ and *Jamieson v Cox*.¹³¹ All ten of these appeals are presented in Table 22.

Table 22: Appeals to Higher Courts over the valuation of unlisted companies between 1976 and 1995

Case	Reference
<i>Crichton v Crichton</i>	[1991] NZFLR 529.
<i>Dean v Dean</i>	unreported (Casey J., 28/08/85, High Court, Auckland, M 15/05/04).
<i>Giles v Giles</i>	[1985] 1 NZLR 761
<i>Holt v Holt</i>	[1987] 1 NZLR 85 (CA), [1990] 3 NZLR 401 (PC).
<i>Jamieson v Cox</i>	[1990] NZFLR 165.
<i>Leucadia National Corporation v Wilson Neil</i>	[1994] 7 PRNZ 701.
<i>Pountney v Pountney</i>	unreported (Casey, Hardie Boys, McKay JJ. 28/09/91, Court of Appeal, CA 45/91).
<i>Sauer v Cameron</i>	unreported (McGechan J., 26/05/93, High Court, Wellington, AP 265/92).
<i>Thomas v H W Thomas Ltd</i>	[1984] 1 NZLR 686.
<i>Wilson v Wilson</i>	unreported (Tompkins J., 7/08/84, High Court, Auckland, M 1586/83).

*Crichton v Crichton*¹³² and *Jamieson v Cox*¹³³ will be discussed in more detail in Section D-I, and Section C-III-b of this Chapter respectively. In *Crichton v Crichton*

¹²⁹ See Chapter 4 for a discussion of the work of Kantor and Pike (1987a and 1987b).

¹³⁰ [1991] NZFLR 529.

¹³¹ [1990] NZFLR 165.

¹³² [1991] NZFLR 529.

¹³³ [1990] NZFLR 165.

the initial Judge's decision was overturned because he appeared to have simply averaged the two valuations of the expert witnesses. In *Jamieson v Cox*, Richardson J. ruled that insufficient consideration had been given to the growth rate by the Family Court Judge.

However, generally there was a reluctance by Judges to overturn issues of valuation evidence. For example, in *Pountney v Pountney*,¹³⁴ Hardie Boys J. stated that: (p.28)

... This Court will naturally be reluctant to differ from what was a conclusion of fact reached by a Judge who had the advantage of seeing and hearing the valuers as they gave their evidence and were cross-examined extensively upon it.

In *Wilson v Wilson*,¹³⁵ Tompkins J. dismissed an appeal against a valuation judgment, because the plaintiffs had the chance to challenge the expert witness at the time of the original appeal, but had failed to do so: (p.7)

The evidence sought to be adduced is contentious in the sense that Mr. Frankham's evidence is designed to challenge the evidence that had been given by Mr. Kasper. Indeed, to admit this evidence would involve a complete re-opening of all the evidence relating to the share valuations. The respondent would need to be given the opportunity to re-call Mr. Kasper to comment on Mr. Frankham's evidence ...

Therefore, Judges are reluctant to change the decisions of lower Court Judges, unless it is clear that the valuation exercise was not considered in detail, or an important factor has not received sufficient weight. Additionally, further evidence designed to challenge earlier decisions will not be considered if there was ample opportunity for it to have been presented in a lower Court.

V. Industry Influence

Chapter 2 discussed the possibility that the particular industry could influence the valuation methods used by expert witnesses. One of the problems with a country the

¹³⁴ unreported (Hardie Boys, McKay, Casey JJ., 20/09/91, Court of Appeal, CA 45/91).

¹³⁵ unreported (Tompkins J., 7/08/84, High Court, Auckland, M 1586/83).

size of New Zealand, is that industries are difficult to define. The only clearly definable industry in the data analysed, was that of farming.

Chapter 3 discussed asset approaches to valuation. Farm companies are often characterised by low earnings, making asset approaches more suitable than for other companies. This finding was supported in the results. In the four farm cases found (from Database Three), assets approaches were always used by at least one of the expert witnesses. The only farm case where an assets approach was not accepted, was in *Holt v Holt*,¹³⁶ which was discussed in Chapter 5.

VI. Other Variables

Chapter 2 discussed the possibility that a variety of variables might influence the judgment concerning the valuation of unlisted companies. However, no evidence was found that other external variables (for example the Court location, type of Court, sex of the parties, etc.) affect the valuation of shares in unlisted companies.

For example, the extent of the influence of individual Judges could not be determined because of the large number of Judges involved (45 in Database Three). Additionally, it was not possible to examine if valuation experts adjusted their valuation according to the party they represented because for all cases examined (Database Three) the plaintiffs and defendants hired expert witnesses who supported their views. Only those cases where agreement has not been attained will reach the Courts.

Even if such influences do exist, the method employed in this thesis did not allow them to be distinguished from the normal “noise” of other factors in the Courts. Further research using a different method would be required to examine such relationships.

¹³⁶ [1987] 1 NZLR 85 (CA).

C. Valuation Method

This Section details the results of this thesis concerning the valuation methods used in the New Zealand Courts to value unlisted companies. The theory concerning valuation methods was discussed in detail in Chapter 3. This Section has been split into three Sub-Sections: valuation methods used, valuation methods preferred by the Courts, and evaluation of valuation methods used.

I. Valuation Methods Used

Table 23, which is derived from Database One, summarises the valuation methods discussed in New Zealand Court judgments. This includes the comments of Judges, valuation experts and lawyers recorded in the judgment.

Table 23: Methods discussed in 51 New Zealand Court cases from 1976-1995

Method	Number of Cases	Percentage of Cases
Notional Liquidation	26	51.0%
Capitalised Maintainable Earnings (CME)	25	49.0%
Net Assets	14	25.5%
Dividend based	7	13.7%
Goodwill and Net Assets	6	11.8%
Discounted Cash Flow Analysis (DCF)	4	7.8%
Goodwill and Notional Liquidation	2	3.9%
Price Earnings Ratios	1	2.0%
Hybrid: CME + Net Assets + Goodwill	1	2.0%
Capital Asset Pricing Model	1	2.0%
Net Free Cash Flows	1	2.0%

In Database One there were a total of 119 valuations by expert witnesses. Table 24 presents the preferred valuation methods used by these expert witnesses. This Table does not include the comments of Judges and lawyers that were included in Table 23.

Table 24: Methods used in 119 expert witness valuations in the New Zealand Courts from 1976-1995

Method	Number of Valuations	Percentage of Experts
Capitalised Maintainable Earnings (CME)	40	33.6%
Notional Liquidation	39	32.8%
Net Assets	16	13.4%
Dividend based	7	5.9%
Goodwill and Net Assets	7	5.9%
Discounted Cash Flow Analysis (DCF)	3	2.5%
Capital Asset Pricing Model	2	1.7%
Hybrid: CME + Net Assets + Goodwill	2	1.7%
Price Earnings Ratios	1	0.8%
Goodwill and Notional Liquidation	1	0.8%
Net Free Cash Flows	1	0.8%

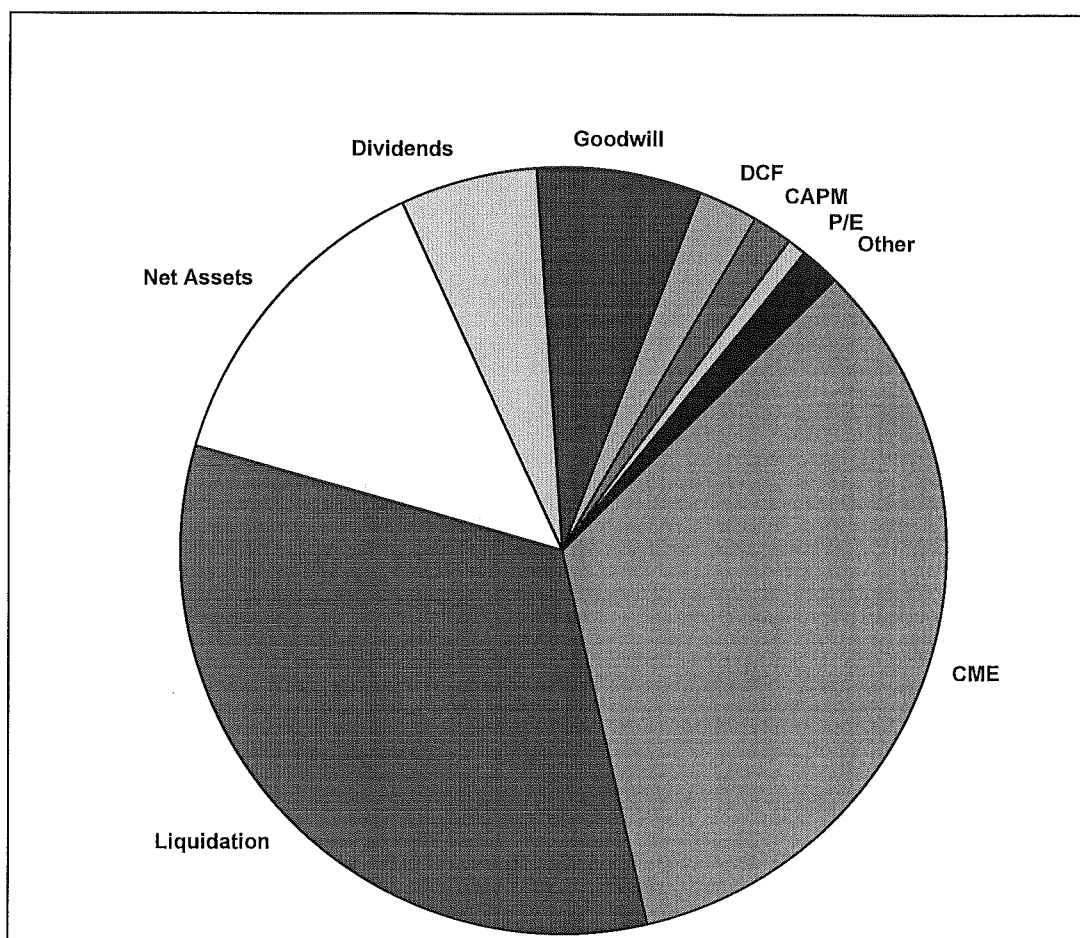
Figure 4 illustrates graphically Table 24. For the purpose of clarity in Figure 4, goodwill and net assets and goodwill and liquidation value have been combined in the category goodwill. Additionally, the hybrid and net free cash flow methods were included under the category “other”.

Table 23, Table 24 and Figure 4 provide evidence that capitalised maintainable earnings (CME) and notional liquidation are the most common valuation methods for unlisted companies in the New Zealand Courts. 82.1% (42) of cases from Database One discussed either CMEs or notional liquidation, and 66.4% (79) of expert witness valuations used one of these two methods.

The finding that CME and notional liquidation are the most common valuation methods, is consistent with New Zealand literature in the field.¹³⁷ For example, these two methods were advocated by Hicks, Walton and Watts (1992) in their matrimonial property valuation seminar. However, the popularity of CME differs noticeably from the situation in the United States of America (US), where Martin (1975) found that the capitalisation of average profits was very uncommon (only 6% of cases).¹³⁸

¹³⁷ This literature was discussed in Chapter 4.

¹³⁸ Discussed in Chapter 4.

Figure 4: Preferred expert witness valuation methods

Despite the modern literature that has argued for the theoretical superiority of DCF analysis,¹³⁹ it is still a relatively uncommon method in New Zealand. Only 2.5% of expert witness valuations used the DCF method (see Table 24). An Australian researcher, Brown (1991), found no evidence that the Courts in New Zealand had considered DCF analysis.¹⁴⁰ However, 7.8% of Court cases in Database One discussed the DCF method (see Table 23).

The price earnings ratio (PER) method¹⁴¹ was remarkably uncommon, with it being used in only one case by one valuation expert. This contrasts significantly with

¹³⁹ For example, Brown (1991), Keane (1992) and Gregory and Hicks (1995).

¹⁴⁰ See Chapter 4.

¹⁴¹ Based on comparable companies.

Scotland, where Keane (1992) found PERs to be the most common method.¹⁴² However, it must be noted that Keane (1991) concluded that PERs were not implemented correctly in Scotland, as accountants used both future maintainable earnings and comparable companies.

Frequently the Courts outlined the valuation methods available. An example of this, was in *New Zealand Motor Bodies v Emslie*.¹⁴³ The defendant's expert witness, Mr Brown, stated what he believed to be the four most common methods:

- I. Capitalisation of profits.
- II. Dividend yield.
- III. Tangible assets plus goodwill.
- IV. Asset value on notional liquidation.

This is very similar to the findings of this thesis. In both Table 23 and Table 24 capitalised maintainable earnings, notional liquidation and dividend based methods were among the four most common methods. The exception is tangible assets plus goodwill. Net assets ranked ahead of this method in both of the Tables, however, goodwill and net assets was still ranked fifth most common. These methods are discussed in more detail in Sub-Section B-III-b.

II. Valuation Methods Preferred by the Courts

Database Two was used to find the cases where particular valuation methods were preferred by the Courts. In 17 of these 51 cases (33.3%), the Courts valued the firm according to the assessment of one of the expert witnesses.

The methods used by expert witnesses in the 17 cases (out of 51) where judgments favoured particular expert witnesses valuations, are presented in Table 25.

¹⁴² See Chapter 4.

¹⁴³ [1985] 2 NZLR 569.

Table 25: Methods used by expert witnesses favoured in New Zealand Court cases from 1976-1995.

Method	Number of Cases	% of Clear Cut (17) Cases	% of all (51) Cases
Capitalised Maintainable Earnings	9	52.9%	17.6%
Notional Liquidation	5	29.4%	9.8%
Net Assets	1	5.9%	2%
Unclear	2	11.8%	3.9%

From Table 25 it is apparent that the CMEs method has the highest chance of outright success for a valuation expert in the New Zealand Courts. The Courts have generally followed the approach presented in Chapter 5. A preference is shown for going-concern valuations (CME in particular), with notional liquidation normally considered suitable only where a liquidation is likely.

III. Evaluation of Valuation Methods Used

This Sub-Section evaluates the methods used in the valuation of unlisted companies in New Zealand. To ensure consistency (with Chapter 3), and effectively present the information, this Sub-Section has been split into the categories of finance theory and tradition valuation methods.

a. Finance Theory:

Rarely was finance theory discussed in the Court cases examined. Generally it was only considered when one of the expert witnesses used a modern finance technique. An exception to this, was in *Crichton v Crichton*,¹⁴⁴ where the respondents expert witness, Mr Hagen, used the notional liquidation method, yet still discussed cash flow analysis: (Jeffries J., p.535)

4. Basis of Valuation

4.1 *In general terms the value of a share represents the present value of the net cash flow expected therefrom, in the form of either dividends and share sale proceeds, or a residual sum derived from the liquidation of the business undertaking.*

¹⁴⁴ [1991] NZFLR 529.

This statement by Hagen is theoretically correct, as the benefits derived from any share will be in the form of dividends, any change in market value, and the residual value of the shares if they are liquidated.¹⁴⁵ However, it is questionable whether Hagen would have used DCF analysis if he had decided to value the firm on a going-concern basis. As was discussed in Chapter 3, Hagen (1987) was of the view that traditional valuation methods equate to DCF analysis.

Discounted Cash Flow Analysis

It was shown in Chapter 3 that DCF analysis is an excellent method by which to value unlisted companies. It is interesting to consider the Court cases that have included a DCF analysis in New Zealand, and the judgments regarding them. In three valuation cases, DCF analysis was implemented by an expert witness (from Database One). These cases are shown in Table 26.¹⁴⁶ All are High Court cases, although *Holt v Holt*¹⁴⁷ was upheld on two subsequent appeals to the Court of Appeal¹⁴⁸ and Privy Council.¹⁴⁹

Table 26: New Zealand cases between 1976 and 1995 found to include a DCF analysis

Case	Reference
<i>Holt v Holt</i>	(1985) 3 NZCLC 100,096
<i>Lusk v Archive Security Limited</i>	(1991) 5 NZCLC 66,979
<i>Multiply v Old Mill Farm & Ors</i>	(1995) 7 NZCLC 260,746

*Holt v Holt*¹⁵⁰ was discussed in detail in Chapter 5. The expert witness for the applicant was Mr Sutherland. He estimated the value of the share in question, by calculating the advantages the owner would receive; effectively a DCF analysis.

¹⁴⁵ See the Section on DCF analysis in Chapter 3.

¹⁴⁶ *Crichton v Crichton* [1991] NZFLR 529 also briefly discussed DCF analysis (this is why there are four DCF cases in Table 23). Additionally, it could be argued that *Mirage Entertainment Corporation (in rec) v Arthur Young* (1992) 6 NZCLC 68,213, should be included, although this case has been classified under the CAPM in this thesis.

¹⁴⁷ (1985) 3 NZCLC 100,096 (HC).

¹⁴⁸ [1987] 1 NZLR 85 (CA).

¹⁴⁹ [1990] 3 NZLR 401 (PC).

¹⁵⁰ (1985) 3 NZCLC 100,096.

One of the primary criticisms of the valuation by Mr Sutherland, was that it did not distinguish sufficiently well between the benefits received from owning the share, and being employed by the company. This was not a criticism of the DCF method, but rather the estimates of future benefits that Mr Sutherland made.

Interestingly, Heron J. commented that the assets value method was appropriate. Yet after taking into account a premium for the value of the control the share possessed, he arrived at a valuation of \$150,000. This equated with the DCF analysis that was undertaken by Mr Sutherland.

The *Holt*¹⁵¹ case went to the Court of Appeal, where Mr Sutherland's DCF valuation was criticised further. The respondents expert witness, Mr Hadlee, conducted a similar exercise to that of Mr Sutherland, using a different tax rate and contingency deductions, leading to a valuation of \$32,100. As was discussed in Chapter 3 and Chapter 4, it is important that the assumptions imputed into any valuation are justified. It would have been as simple for Hadlee to criticise Mr Sutherland's valuation using different assumptions, if the CME method had been used. However, under a DCF valuation, there should be less need for Mr Sutherland to hide behind the defence of judgment.¹⁵²

Cooke P. criticised the time frame assumed by Mr Sutherland in his calculations:
(p.88)

A further flaw is that the right of control attached to the A share is not limited to the life of the husband. It continues as long as the company remains in existence. At the most, I think, a purchaser of the A share might have some regard to the present value of the kind of benefits taken into account in the exercise, as would the vendor, but it would be far from determinative of the price they would be willing to agree upon.

This can be viewed as valid criticism of Mr Sutherland's implementation of the DCF method. As was discussed in Chapter 3, he should have estimated any cash flows from the share for a short period (perhaps between 5 and 10 years), and then discounted

¹⁵¹ *Holt v Holt* [1987] 1 NZLR 85.

¹⁵² See Chapter 3.

a residual value based on a perpetuity formula. This would have recognised the fact that the share had no predetermined life.

*Lusk v Archive Security Limited*¹⁵³ was a case concerning an application under s209 and s217 of the Companies Act 1955 to order the purchase of shares in a company whose primary business was the bulk storage of documents and records. The defendants expert witness, Mr Somerville "... used what was described as a discounted cash flow method of valuation and arrived at a figure of \$550,000" (Gallen J., p.66,992). By contrast, the plaintiff relied on the evidence of Mr Pope, who utilised the capitalised maintainable earnings method (resulting in a valuation of \$228,000).¹⁵⁴ Gallen J. made the following comments concerning the two valuations (p.66,992):

... While the results were markedly different there were a number of areas in which their approaches were similar and where they considered that factors of significance were to be assessed on the same basis.

... The approach adopted by Mr Pope is one that has frequently been accepted by the Courts and has the advantage of taking into account the special circumstances which relate to a company such as this whose value is to be expressed rather in terms of what it may produce than what it is worth in terms of accumulated material assets. On the other hand, the approach adopted by Mr Somerville has the advantage of taking into account a factor of great significance in modern business operations where a substantial amount of the operation depends upon the availability of cash and where indebtedness may also be a significant factor in terms of the company's operations. That approach would however, on the whole I think be best suited to a larger more diversified company than this one where the indebtedness is in any event distorted by the inability of the parties to agree on expansion or payments.

These comments by Gallen J. are interesting. He appears to support the view that the DCF method has the advantage of utilising cash flows, and considers the impact of debt upon them. Nevertheless, Gallen J. points out that CMEs has been accepted by the Courts, and claims that it has the advantage of taking into account what the firm will produce, rather than viewing it (the firm) as an accumulation of material assets. However, firms produce cash flows, not arbitrary accounting measures (such as

¹⁵³ (1991) 5 NZCLC 66,979.

¹⁵⁴ Described as capitalisation of anticipated profits.

profits).¹⁵⁵ Therefore, DCF analysis is a superior method than CMEs for assessing this factor. Gallen J. also states that DCF analysis would be better suited to larger, more diversified companies, yet he does not justify these comments. Chapter 3 showed why DCF analysis is a superior method to CMEs for the valuation of all firms. Ultimately, Gallen J. appears to have followed legal precedent, which in New Zealand, has not yet confirmed that DCF analysis is an appropriate means by which to value unlisted companies.¹⁵⁶

*Multiply v Old Mill Farm & Ors*¹⁵⁷ was another company law dispute, this time under s66 of the Companies Act 1955. It concerned the valuation of Milbrook Country Club, a luxury resort located near Queenstown. Mr Laing, a valuer for the applicant, used the net free cash flow method: (Barker J., p.260,768)

Mr Laing's methodology was to assess the value of the future net-free-cash-flow during an intermediate period of high capital expenditure and increasing incomes where the maintainable level of income cannot be predicted. Therefore, the annual estimated cash-flows were discounted back to the present net value. When the development is completed, a maintainable level of income can be predicted. At that stage, income is capitalised to assess the value of that income at the commencement of the consolidation period.

If it could be shown that the benefits gained from owning the shares equated with its net-free-cash-flows, then Mr Laing's method is consistent with DCF analysis. However, his assessment of the residual value relied on a "maintainable" level of income.

The expert witness called on behalf of the defendant, Mr Frankham, used a DCF analysis: (p.260,769)

Mr Frankham's calculations assume that cash-flow equilibrium will be attained in the year 2008; he discounts the value of maintainable cash-flows by discounting the annual cash-flow to perpetuity using a discount rate of 8%.

¹⁵⁵ See Chapter 3.

¹⁵⁶ Although, as was discussed in Chapter 4, DCF analysis has been accepted in other countries by the Courts (see Brown, 1991).

¹⁵⁷ (1995) 7 NZCLC 260,746.

The use of maintainable cash flows, and maintainable income by these two valuers is interesting. It is possible that maintainable cash flows equates with the cash flow perpetuity formula discussed in Chapter 3 (which discounts the final cash flow to perpetuity using the discount rate less a growth rate). However, the abstract “maintainable” concept, implies this method may be different.

Barker J. dismissed the method used by Mr Laing as inappropriate, and quoted from a traditional valuation publication: (p.260,769)

... The net cash-flow method in my view is unreliable and if followed inexorably provides a price which no hypothetical purchaser would be likely to pay; it relies too much on speculation too far into the future as Glover: Valuation of Unquoted Companies 2nd edition page 250 said —

“Precise numerical estimates of profits more than 3-5 years ahead are extremely difficult and often lack credibility.”

Chapter 3 dismissed these criticisms of Glover (1987) concerning the DCF method. Clearly precise estimates of future cash flows (or profits, as per the quote by Glover) cannot be guaranteed as eventuating. This is why the discount rate under the DCF method is given for a particular level of risk (variability in the predicted returns). Additionally, the claim by Barker J. that no hypothetical purchaser would rely on the DCF method, displays an ignorance of the commercial environment in which modern businesses operates. It is now common practice for companies (who would be among potential purchasers of the Milbrook Country Club) to assess any investment through the use of DCF analysis.¹⁵⁸

Barker J. proceeded to value the shares of the company at \$600,000. He made the following comments concerning the valuation: (p.260,770)

In so reaching this hopefully informed assessment — without the benefit of some arcane method of valuation, I follow respectable precedent. In Holt's case, Heron J at first instance did what Cooke P on appeal indicates as proper; he made a discretionary judgment based on the relevant factors in of hypothetical negotiation and without relying on formulae . . .

¹⁵⁸ See any modern finance or management accounting text.

This is one of those relatively rare cases where share valuers' and textbook approaches are of limited help . . .

Barker J. does not explain why his valuation will be more accurate than a correctly implemented DCF analysis. However, his emphasis on the importance of the relevant factors is consistent with good valuation practice and earlier Court decisions (see Chapters 4 and 5).

Capital Asset Pricing Model

In only one New Zealand case was the CAPM used. Two expert witnesses in *Mirage Entertainment Corporation (in rec) v Arthur Young*¹⁵⁹ utilised this method. The case concerned the valuation of a firm in the motion picture industry, for the purpose of a share prospectus. Technically, this case lies outside the scope of this thesis, because it involved a contract for the valuation of the assets in a company, not the company itself. However, because this was the only case which was found that included the CAPM, this was overlooked.¹⁶⁰

Arthur Young used the CAPM to obtain the discount rate for a DCF valuation. Film projects were seen as having a finite life over which future cash flows could be estimated. This is an advantage for using the DCF method, as a residual value did not need to be estimated at some point in the future. Both the plaintiffs and defendants accepted the use of the method, because the success of the firm was totally reliant on the cash flows of the films.

Arthur Young valued the films on the basis of future estimates given by management (not an independent assessment), and a beta factor of 1.1. This beta estimate was dubious, given that the movie industry is notoriously risky. Listed stocks of companies which on the surface would appear to have considerably less risk, had the

¹⁵⁹ (1992) 6 NZCLC 68,213.

¹⁶⁰ This is the only case of this nature that was included in the current study. It can be argued that the value of all the assets of the company (in this instance motion picture projects) would comprise the value of the entire company. However, the interaction between these projects, and their overall management by the companies employees, may make such an assumption unrealistic.

following betas: Fletcher Challenge (1), Fay Ritchwhite (1.85), and Air New Zealand (1.3). Smellie J. made the following comments (p.68,243):

As a matter of common sense I am unable to see how the Defendant could have selected a beta factor of 1.1 for the relative risk of film producing which was an infant and untried venture in New Zealand at the time, when beta factors for other much less risk intensive ventures such as Air New Zealand and Fay Ritchwhite were significantly higher.

Mr Hagen was employed by the plaintiffs to value the shares. He used the same method, yet produced his own estimates of the future cash flows from the films at the date of the prospectus. Using a beta factor of 1.9, he provided a considerably lower valuation, which Smellie J. accepted as more realistic.

The limitations of the CAPM method for valuing unlisted companies are readily apparent in this case. The assessment of the beta factor by both expert witnesses was totally arbitrary. It would have been simpler to estimate a required rate of return for the level of risk from the film projects (in this instance, high).¹⁶¹ Even if the CAPM had been the appropriate valuation method (as accepted by Mr Hagen and Arthur Young), the implementation of the method by Arthur Young was incompetent.

b. Traditional Valuation Methods

As was shown in Table 23, Table 24, and Figure 4, traditional valuation methods were the most popular for the New Zealand Courts. Judgments regarding issues concerning these valuation methods will now be discussed.

Capitalised Maintainable Earnings

CMEs was found to be one of the two most popular methods used in the New Zealand Courts (along with notional liquidation). It was considered in 25 out of 51 (49%) cases (Table 23), and used in 40 out of 119 (33.6%) valuations (Table 24).

¹⁶¹ See Chapter 3.

Appropriateness of CME

The Courts have ruled on when they consider the CME method to be appropriate. One of the key judgments was in *Coleman v Myers*,¹⁶² where Mahon J. stated that: (pp.258-259)

There are different methods for arriving at share valuations, including capitalisation of profits, capitalisation of dividends, dividend-yield, notional liquidation, and other methods that need not be considered here. The normal way of assessing share values in a company which is a going concern is to apply the capitalisation of profits method or other calculation based on earnings . . .

This acceptance of the CME method for going-concerns, has been supported in a number of cases. An example of this was in *G v G*,¹⁶³ where the CME method was used by two expert witnesses to value an engineering company. They both backed up their CME findings with a notional liquidation. Strettell J. quoted from Blair (1990) that a notional liquidation was only appropriate where liquidation was likely to follow purchase, and hence: (Strettell J., emphasis added, p.17)

*In the circumstances although it may be appropriate in the light of Hatrick to check a valuation based on the notional liquidation value, the prime method of valuation of these shares **must** be a capitalisation of earnings method.*

Estimation of Maintainable Earnings

Chapter 3 discussed the debate in the literature over whether maintainable earnings should include future information. In the Court cases considered, the normal approach was to base maintainable earnings on past data, preferably over more than one year.

An example of this was in *G v G*,¹⁶⁴ where two expert witnesses were called. Mr Wilson simply considered the previous years profit indicative of the maintainable

¹⁶² [1977] 2 NZLR 225

¹⁶³ Case name withheld at the request of the Christchurch District Court Registrar.

¹⁶⁴ Case name withheld at the request of the Christchurch District Court Registrar.

earnings. By contrast, Mr Owen averaged three of the previous four years, disregarding what he considered to be an exceptionally good year. Strettell J. ruled that: (pp.18-19)

In my view a valuation based on one year is not reflective of this company's maintainable future earnings. It is appropriate to widen the base for determining the future maintainable earnings. Rather than be rash as suggested by Mr Wilson it is fair given the retained earnings and a comparative valuation based on a notional liquidation. In the end to use only one year would in my view be unfair.

In *W v W*,¹⁶⁵ future information was considered a relevant factor in the valuation evidence presented by an expert witness, Mr Startup: (Inglis J., pp.10-11)

... The future maintainable earnings are the estimated tax paid profits available to shareholders in future years, and the valuer's judgment will be influenced by the company's recent trading history, available forecasts for the current and succeeding year, non-recurring factors, and (in this case) an adjustment of shareholder salaries to reflect a level of compensation by way of salary normal in the sphere of activity in which the company engages ...

In *Pountney v Pountney*,¹⁶⁶ a case that was upheld on appeal,¹⁶⁷ the two expert witnesses disagreed on the time period over which to assess maintainable earnings. Mr Moore averaged the earnings for 4 years prior to each of his valuations, but this was criticised by Mr Tuck: (Robertson J., p.161):

Mr Tuck disagreed with 4 yearly averaging at a time of rampant inflation (as it was not averaging like values) ...

However, Robertson J. did not rule specifically on this issue, and simply assessed the value of the shares as he felt appropriate given the evidence.

In *Heaslip v Scott*¹⁶⁸ Robertson J. described the process two expert witnesses used; apparently working from prior sales data to obtain the future maintainable profit: (p.8)

¹⁶⁵ Case name withheld at the request of the Christchurch District Court Registrar.

¹⁶⁶ [1990] 7 FRNZ 156.

¹⁶⁷ *Pountney v Pountney* unreported (Hardie Boys J., 20/09/91, Court of Appeal, CA 45/91).

¹⁶⁸ unreported (Robertson J., 27/3/92, High Court, Rotorua, M 55/90).

... Both of them agree that the appropriate way of assessing valuation in a case such as this is an earnings capitalisation method. Each of them took the historical data existing up until 31 March 1986, averaged out what the turnover had been and determined a figure for maintainable profit.

Estimation of the Capitalisation Rate

The question arises as to how the capitalisation rate is assessed in practice. Chapter 3 showed that the assessment of the capitalisation rate will be judgmental. Some authors have argued that it needs to include information on the risk and growth prospects of the firm. This has been accepted in Court cases. For example, in *G v G*,¹⁶⁹ Strettell J. stated that: (pp.19-20)

... The capitalisation rate is dependent upon a number of factors including risk-free return, risk assessment and growth prospects. It is as Mr Blair states in his book "not capable of precise measurement". Mr Wilson conceded under cross-examination that Mr Owen's figure of 20% could be considered within an acceptable range. I propose to accept that as an appropriate rate given firstly the current returns on non-risk investments, the balancing of the risk assessment by the retained earnings and the acknowledgement by Mr Wilson that there was justification in Mr Owens' assertion that the government stock interest factor in the calculation should be incorporated at an after-tax figure rather than his pre-tax allowance making a difference of some 2%.

In *W v W*,¹⁷⁰ Inglis QC made the following comments on the method that was used to ascertain the capitalisation rate: (p.11)

... The capitalisation rate is assessed from the starting-point of the return available from a risk-free long term investment and adjusted to reflect such risk factors as the nature of the company's assets, customer and supplier relationships, competition and industry trends, prospects for growth, and general economic conditions.

In *Heaslip v Scott*,¹⁷¹ Robertson J. considered the factors which the two expert witnesses agreed influenced the assessment of the capitalisation rate: (pp.10-11)

¹⁶⁹ Case name withheld at the request of the Christchurch District Court Registrar.

¹⁷⁰ Case name withheld at the request of the Christchurch District Court Registrar.

¹⁷¹ unreported (Robertson J., 27/3/92, High Court, Rotorua, M 55/90).

- I. the risks involved with being a small company;
- II. the reliance on Messrs White and Scott for direction and earnings;
- III. the ease of entry into the market;
- IV. the nature of the business; and,
- V. the “prospectivity” of the maintainable earnings (likelihood of them eventuating).

It was unusual for expert witnesses to describe the capitalisation rate as simply a discount rate less the firms growth rate. In *Jamieson v Cox*,¹⁷² an expert witness, Mr Hagen, discussed the growth rate he had used: (Richardson J., p.168)

... Mr Hagen refused to give any particular weight to each of those factors, except to note that he had allowed 9% to 10% for the growth factor, saying that ... at the end of the day the decision was a matter of judgment rather than of arithmetical calculation. ...

Initially, Gallen J. had preferred the approach taken by the other expert witness, Mr Dobson, who had placed less emphasis on the growth rate. However this was overturned on Appeal in *Jamieson v Cox*:¹⁷³ (Richardson J., p.168)

... Although Mr Dobson said that he had taken into account the potential for growth in the business of the company in arriving at his overall assessment, he did not particularise a percentage for growth, and, more importantly, there is no room in his calculations for a significant weighting of that factor. We are satisfied that this anticipation of future growth would have been an important consideration for a willing buyer and willing seller.

There is confusion over the terms CME and price earnings ratios (PER). In this thesis, the PER method was described as that preferred by Keane (1992); a method distinct from CMEs where comparable companies are used. However, in the Courts the term PER is often simply the reciprocal of the capitalisation rate. For example, in *P v P*¹⁷⁴ (a case which was predominantly upheld in the High Court),¹⁷⁵ two expert

¹⁷² [1990] NZFLR 165.

¹⁷³ [1990] NZFLR 165.

¹⁷⁴ Case name withheld at the request of the Christchurch District Court Registrar.

¹⁷⁵ Case name withheld at the request of the Christchurch District Court Registrar.

witnesses, Mr Blair and Mr Fernyhough used the maintainable earnings method. However, Inglis J. proceeded to discuss the case with reference to PERs, which were the reciprocals of the capitalisation rates applied.¹⁷⁶ This was not an example of the PER method described in this thesis, because comparable companies were not used. Another example, was in *Alpine Dairy Products Limited v Braddock*,¹⁷⁷ where Henry J. stated: (p.5)

... The report then discussed the capitalisation rate and settled on a price-earnings ratio of 6.25 which equates to a capitalisation rate of 16% ...

A similar use of the term PER was in the case of *Heaslip v Scott*:¹⁷⁸ (Robertson J., p.10)

... Mr Hagen in his report indicated that a capitalisation rate of in the rather wide range of 33% to 50% was appropriate noting this was an earnings multiple of between 2 and 3. Mr Watson took an earnings multiple of 3 when he did his calculation. Mr Hagen took an earnings multiple of 2 when he did his calculation.

These cases can be viewed as having attempted to justify expert witness valuations with allusions to the “theory” necessary for the CME method and the “reality” represented by PERs. Such an approach is fundamentally flawed because the PER method of comparable companies was not followed. The fact that the reciprocal of the capitalisation rate approximated PERs was mere coincidence (see Chapters 3 and 4).

Treatment of Surplus Capital

The issue of surplus capital was discussed briefly in Chapter 3. There exists debate in the literature as to whether surplus assets should be deducted from a CME valuation. Two Court cases were found where surplus assets were deducted by expert witnesses.

¹⁷⁶This was discussed in Chapter 3, where PERs were shown in Equation 10 to be arithmetically reconcilable with the CME method under certain assumptions.

¹⁷⁷ unreported (Henry J., 28/6/94, High Court, Auckland, CP. 152/91).

¹⁷⁸ unreported (Robertson J., 27/3/92, High Court, Rotorua, M 55/90).

In *G v G*, one of the expert witnesses, Mr Owen, in his maintainable earnings estimate, suggested that because the firm had surplus assets, these should be separated: (pp.12-13)

Subsequently at the hearing Mr Owen raised the novel possibility that in determining the share value one should add to the future maintainable profits the surplus assets of the company.

This idea was dismissed by Strettell J. for the particular case: (p.17)

I do not consider this company does in fact have surplus assets that should be reflected in the valuation of the shares in the sense of them being added to the future maintainable profits to determine the value. . .

The other case where surplus assets were considered in a CME valuation, also rejected that there were surplus assets: (*Jamieson v Cox, Richardson J.*, p.167)¹⁷⁹

. . . Mr Hagen was of the view that there were certain assets which were surplus to the operating requirements of the company and which a hypothetical buyer and seller would have considered could properly be withdrawn from the company . . . Accordingly, he excluded income arising from those assets in arriving at his earnings figure. . .

. . . Mr Dobson concluded for those broad reasons that the assets could not be regarded as surplus to the business, and added that if they were withdrawn from the business the equity ratio would have been reduced from 50% as at 31st March 1985 balance date down to an unsatisfactory level of under 30%. Gallen J. preferred the approach taken by Mr Dobson and having had the benefit of full submissions from counsel we are not persuaded that the judge erred in his assessment of the matter so as to justify appellate interference in that decision.

Price Earnings Ratios

The only case that assessed value by way of PERs of comparable companies, was *Leucadia National Corporation v Wilson Neil Ltd.*¹⁸⁰ This judgment involved the valuation of various Australian controlled brewery shares, in a complex restructuring process. The plaintiff, was an owner in the Wilson Neil shares: (Barker ACJ, p.697)

¹⁷⁹ [1990] NZFLR 165.

¹⁸⁰ [1994] 7 PRNZ 693 (HC), [1994] 7 PRNZ 701.

The plaintiff accepts that, if Wilson Neil's current Australian hotel and brewing interests are to be transferred at a proper value, then there can be no issue in the proceedings.

An independent report was commissioned from the accounting firm Deloitte Australia, who assigned Mr Gower to the case: (Barker ACJ, p.697)

This expert, Mr Gower, considered that the transaction was fair and reasonable; that the fair value of the subsidiary in which Wilson Neil was quitting its interest was in the range of nil to A\$4.3 m; that the proposed consideration exceeded the value of the subsidiary (Ripwood) and therefore the arrangement was fair to the Wilson Neil shareholders. He considered that a company with 9 month pre-tax earnings of A\$4.5 m and a forecast full-year earning of A\$9.9 m could be said to have a fair value of between nil and \$4.3 m.

The plaintiffs hired an expert from another accounting firm, KPMG in New York, Mr Bingham. He criticised the Deloitte report for failing to apply a correct EBIT multiple (earnings before interest and tax). However, Mr Bingham did not provide a valuation. The defendant's expert witness responded, and the Judge commented: (Barker ACJ, p.697)

Mr Gower acknowledged that the EBIT multiples for comparative brewery companies had been wrongly calculated as pointed out by Mr. Bingham. He suggested that the EBIT multiple in his report for Wilson Neil was nevertheless appropriate because it was based on subjective conditions; these rendered immaterial his original arithmetic error with respect to the comparisons.

I do not find it helpful to submit the calculations to a detailed critique because I have no alternative valuation. I consider that the essential point is that Mr Gower's valuation is based on his actual valuation of the Wilson Neil assets and not on their historical value. The plaintiffs' alternative calculations are based on the published accounts of Wilson Neill as exhibited in the memorandum; these were based on historical cost. Mr Gower's valuation was based on his considered view of the actual realisable value of the assets. Mr Gower is familiar with the Australian marketplace.

Barker ACJ. thus upheld the valuation of Mr Gower. In the Court of Appeal, Cooke P., Gault and McKay JJ. upheld the decision of Barker ACJ. The valuation was described in some detail: (McKay J., 705)

The report then considers each of the five principle businesses in some detail before proceeding to an assessment of value. This is approached on the basis of a willing but not anxious buyer and a willing but not anxious seller, acting at arms length with each party having full and adequate information. Regard is had to the risk free rate of return available on 10 year Government bonds, to the price earnings multiples prevailing for similar companies based on stock exchange prices, and to multiples paid to similar businesses in recent takeovers and acquisitions. Each of the Cascade businesses is valued, and certain adjustments made. Mr Gower concludes that the Cascade Group has a value based on multiples of earnings before interest and tax ("EBIT") between nil and \$4.3 m. He looks then at the future maintainable earnings before tax, and finds them to be consistent with his valuation.

The valuation by Mr Gower of the shares in question, relied heavily on the PER method, but was also influenced by other factors: (McKay J., p.509)

It was submitted that it contradicts common sense to ascribe a value of "nil to 4.3 m" to a company with pre-tax earnings for the 9 months to 31 March 1994 of A\$4.5 m. At first sight this appears to be so. But as Mr Gower explained, a share valuation must look at future maintainable earnings, not merely at actual earnings in the most recent year. An adjustment must be made to the earnings of the Cascade supply and distribution rights, which exist only for a limited period, and for anticipated future interest rates. Mr Gower's valuation took account of such matters, and arrived at maintainable earnings after tax of A\$0.6 m . . .

It is unclear from the judgment whether Mr Gower applied the comparable PERs to his maintainable earnings estimate. If he did so, then he made the same mistake that Keane (1992) found amongst Scottish accountants, with growth being double counted.¹⁸¹

It is worth noting, that although tried in the New Zealand Courts, this case concerned Australian shares, and an Australian valuation expert. This may be the reason why the PER approach was used, as no Court valuations for New Zealand companies were found that followed this valuation method.

¹⁸¹ See Chapter 4.

Assets Based Methods

Assets based methods were found to be common in the New Zealand Courts (see Tables 23 and 24). In particular, notional liquidation was one of the two most popular methods. This Section discusses some of the issues concerning assets based methods.

Appropriateness of Notional Liquidation

Along with CMEs, notional liquidation was the most common valuation method in the New Zealand Courts. It was discussed in 26 out of 51 (51.0%) of cases (Table 23) and used in 39 of 119 (32.8%) of valuations (Table 24). Where the appropriateness of notional liquidation was discussed in a judgment, the rulings followed those outlined in Chapter 5. For example, in *G v G*, Strettell J. (p.16) cited *Hatrick*¹⁸² and quoted a passage from Blair (1990, p.20) regarding when liquidation is suitable:

Generally this method should be used only in those limited circumstances where not only do the shares being valued carry the power to cause liquidation but the earnings record of the company is so poor that it is obvious that the purchaser of the shares would be seriously contemplating liquidation.

Deduction of Liquidation Expenses in Matrimonial Property Disputes

Chapter 2 discussed whether or not a valuation for matrimonial property purposes is different from normal valuations, in particular with respect to the deduction of liquidation expenses from the net asset value. One of the first cases under the Matrimonial Properties Act 1976, was *Seiringer v Seiringer*.¹⁸³ In this case, Ongley J. followed normal precedent, and allowed a deduction for liquidation expenses: (p.186)

... On the question of an allowance for loss on break-up and profit, however, I believe Mr Ulrich is correct in making such an allowance. Kessing v. Commissioner of Stamp Duties is good authority for that ...

¹⁸² *Hatrick v CIR* [1963] NZLR 641.

¹⁸³ (1980) 4 MPC 185.

However, in *Page v Page*,¹⁸⁴ Speight J. ruled that the overriding concern under the Matrimonial Properties Act 1976 was the assessment of an equitable outcome. Because of this, Speight J. did not consider the deduction of liquidation costs appropriate: (p.115)

... I think the notional liquidation approach is not totally applicable in that in such calculations allowance is made for expenses of realisation such as estate agents commission, legal and other expenses, and a percentage discount to represent the profit that a purchaser would expect to make out of a liquidation. For the reasons outlined by Mr Carter in his criticisms I think that though perfectly legitimate in the case of an ordinary private company dissolution, it is inappropriate in a matrimonial property case in circumstances such as prevail here where one or other party will probably remain on the property. There will be no transfer of land but merely shares in accordance with directions from a Court order, and for those reasons I do not take into account Mr Bridgeman's (the valuer) allowances for costs and a percentage profit.

Some of the decisions which did not support the approach taken in *Page v Page*¹⁸⁵ were reproduced in Table 3 by Burn (1995) in Chapter 2, and will be discussed in this Sub-Section. Only two cases (other than *Page*)¹⁸⁶ were found that did not support the deduction of liquidation costs in a matrimonial property valuation: *Hayes v Johnston*¹⁸⁷ and *Brigham v Brigham*.¹⁸⁸

In *Flett v Flett*,¹⁸⁹ Hardie Boys J. reached the conclusion that a deduction for liquidation expenses was appropriate, after considering a number of cases, including *Hatrick*.¹⁹⁰ (Hardie Boys J., p.596)¹⁹¹

¹⁸⁴ (1981) 5 MPC 114.

¹⁸⁵ (1981) 5 MPC 114.

¹⁸⁶ *Page v Page* (1981) 5 MPC 114.

¹⁸⁷ [1988] 4 FRNZ 325.

¹⁸⁸ unreported (Tompkins J., 23/4/86, High Court, Auckland, A 28/83).

¹⁸⁹ [1983] 1 FRNZ 587.

¹⁹⁰ *Hatrick v CIR* [1963] NZLR 641.

¹⁹¹ This discussion by Hardie Boys J. is reproduced in a number of other cases, for example, *Sanders v Sanders* unreported (Fraser J., 15/2/90, High Court, Christchurch, M.203/87).

I see no justification for departing from these principles in a matrimonial property case, certainly one such as the present where the parties are not the only shareholders in the company, and so the matrimonial property would comprise only a share in the assets even if it were proper for the existence of the company to be disregarded.

In the judgment of *Harlick v Harlick*,¹⁹² Wallace J. argued strongly against failing to follow legal precedent by not deducting liquidation costs: (pp.9-10)

... I therefore do not consider that it is open to the Court, when it is accepted that the assets liquidation method is appropriate, to adopt some modified form of that method in the case of shares which are matrimonial property; and in any event, to do so could lead to considerable confusion. Moreover, I do not think it is necessary to endeavour to modify the method in order to achieve justice in most matrimonial property cases ...

· Around a similar time, Roper J. also discussed this issue, and came to the same conclusion (*Johnston v Johnston*,¹⁹³ pp.70, 72)

The real question is whether the social legislation of the Matrimonial Property Act calls for a departure from the traditional methods of share valuation, because if this was not a matrimonial property case there could be little complaint with the respondent's accountant's valuation approach.

... What emerges from all the cases is that the particular circumstances of the case govern the approach, and the mere fact it concerns matrimonial property is not of itself a basis for casting aside long standing valuation principles of valuation.

*Hayes v Johnston*¹⁹⁴ was one of the two cases that supported the approach taken in *Page v Page*.¹⁹⁵ This decision is worth considering in detail: (Greig J., p.328)

It is common practice in valuing company shares, particularly in private companies, to make an adjustment for a notional liquidation. But it is not an invariable law imposed by law or principle. In particular in the case of valuation for the purposes of matrimonial proceedings a notional liquidation calculation has been rejected although where there is a real likelihood of liquidation, it may in fact be taken into account. There are a number of judgments which support those propositions, and I refer to Galantai v Galantai (No 2) (1981) 4 MPC 1972; Page v Page (1981) 5 MPC

¹⁹² unreported (Wallace J., 20/10/83, High Court, Auckland, M 533/82).

¹⁹³ (1984) 3 NZFLR 65.

¹⁹⁴ [1988] 4 FRNZ 325.

¹⁹⁵ (1981) 5 MPC 114.

114, and *Brigham v Brigham* HC Auckland, A28/83, 23 April 1986, Tompkins J). [sic] That this is the correct approach has been confirmed by the Court of Appeal in *Holt v Holt* (1986) 4 NZFLR 339. Referring to the judgments in the Court of Appeal in *Hatrick v CIR*. . .

Greig J. concluded that: (p.329)

In the circumstances of this case, in my view, a notional liquidation is not an appropriate basis upon which to value the shares. That being the case the book value of all the assets should be taken as disclosed in the balance sheet but with the adjustment made by Mr Kensington in respect of the deferred profit.

Greig J. thus quoted a number of cases in support of his decision. Three of his authorities are questionable. *Galantai v Galantai (No2)*¹⁹⁶ was simply a case where the CME method was preferred by Chilwell J. over a notional liquidation. As was shown in Chapter 5, the *Hatrick*¹⁹⁷ and *Holt*¹⁹⁸ cases did not overturn existing valuation principles, and if anything, supported the deduction of liquidation expenses. However, Greig J's use of *Page*¹⁹⁹ was appropriate as it did support the non-deduction of liquidation expenses. This was also the case with *Brigham v Brigham*.²⁰⁰ (Tompkins J., pp.15, 19-20)

. . . In the particular circumstances of this case I find it difficult to see why there should be what would be an entirely notional deduction in the value of the shares to allow for liquidation costs and expenses that will not be incurred. This would be no more justified than would be the taking into account of land agent's commission and legal expenses notionally incurred on the sale of a house where one spouse intends to buy the other spouses interest in the house. So I do not think that, to the extent that the asset or liquidation basis of valuing assists in the arriving at a fair value, the costs and expenses of liquidation should be taken into account.

. . . For the reasons I have already expressed I do not consider that, in valuing Mrs Brigham's shares in Brigham Properties Ltd when those shares have agreed to be acquired by Mr Brigham and there are no other shareholders, it is appropriate to make the deduction Mr Walker made for the costs of liquidation and land agent's commission. Disregarding these deductions results in what I consider is a fair valuation of the shares of the company at May 1981 of \$19,000.

¹⁹⁶ (1981) 4 MPC 1972.

¹⁹⁷ *Hatrick v CIR* [1963] NZLR 641.

¹⁹⁸ *Holt v Holt* (1984) 4 NZLFR 339.

¹⁹⁹ *Page v Page* (1981) 5 MPC 114.

²⁰⁰ unreported (Tompkins J., 23/4/86, High Court, Auckland, A 28/83).

However, in the appeal of *Sauer v Cameron*,²⁰¹ McGechan J. explained why ownership type is important, whilst he dismissed the contention that liquidation costs should not have been deducted: (p.6)

There is confusion inherent in that approach. It may well be appropriate in the case of an individual sole trader. It is generally not for a company structure. Its problem lies in the equation of the value of the company's business and the company's shares. They are not the same. If the capital asset represented by the company's business is to be fed out to the shareholders, generally a liquidation of the company is required. Inevitably, there will then be realisation and liquidation expenses; sometimes relatively heavy . . .

In the Court of Appeal case *Pountney v Pountney*,²⁰² it was confirmed that the valuation of shares for matrimonial property purposes should not differ from established valuation principles: (Hardie Boys J., pp.18-19)

It is well settled that the valuation of shares for the purposes of the Matrimonial Property Act is no different an exercise than for other purposes. It requires an enquiry as to the value at which a willing but not anxious vendor would sell and a willing but not anxious purchaser would buy . . . it is essentially a practical question . . . any differences in emphasis or approach that might emerge in the valuation exercise should be resolved in the way best calculated to achieve the statutory purpose of a just division of matrimonial property. And, that it must be so, provided always that is done consistently with overriding valuation principles.

However, as was pointed out by Burn (1995), this statement has not resolved the situation. Three decisions still offer hope for expert witnesses who choose not to deduct liquidation expenses.²⁰³ Unfortunately for valuers, the Court of Appeal has not ruled specifically on this issue.

Net Asset Valuations

Table 23 (25.5% of cases discussed) and Table 24 (13.4% of expert witness valuations) showed that net asset valuations were the third most popular valuation

²⁰¹ unreported (McGechan J., 26/5/93, High Court, Wellington, AP 265/92).

²⁰² unreported (Hardie Boys, McKay, Casey JJ., 20/09/91, Court of Appeal, CA 45/91).

²⁰³ *Page v Page* (1981) 5 MPC 114, *Hayes v Johnston* [1988] 4 FRNZ 325, and *Brigham v Brigham* unreported (Tompkins J., 23/4/86, High Court, Auckland, A 28/83).

method. Many of these were from valuations which followed the *Page*²⁰⁴ judgment. Another type of case where the net asset approach was considered appropriate, was with holding companies. An example of this was in *P v P*,²⁰⁵ and the subsequent appeal.²⁰⁶ In this case, the net asset approach was considered appropriate for a company whose only significant asset was shares in another company (which was valued using an earnings basis).

Goodwill

When goodwill was used, it was normally added to the net asset value, although in three cases it was added to a notional liquidation value. In *Brigham v Brigham*²⁰⁷ the expert witness, Mr Walker, used the following method: (Tompkins J., p.12)

He considered that a prospective purchaser would be unlikely to wish to take over the company structure but would pay an amount similar to a liquidation value but increased by a goodwill figure . . .

In *H v H*,²⁰⁸ Bishpan J. valued the shares by way of a notional liquidation method he devised, that included both a profit to the purchaser, and goodwill: (p.7)

. . . In my view, all that is required in this case is to take the shareholders' funds, add goodwill and the write up between book value and actual value of the vehicles and deduct a value for liquidation and other costs including delay in the realisation and allowance for profit to the purchaser. I was not of course addressed on any of these matters but counsel have agreed that I should proceed in this way.

A similar method was applied in *Harlick v Harlick*²⁰⁹ by Wallace J., who also included both a profit to the purchaser and a goodwill element in a notional liquidation valuation. The inclusion of a profit to the purchaser by these Judges followed normal legal precedent (see Chapter 5). However, the inclusion of goodwill is more

²⁰⁴ *Page v Page* (1981) 5 MPC 114.

²⁰⁵ Case name withheld at the request of the Christchurch District Court Registrar.

²⁰⁶ Case name withheld at the request of the Christchurch District Court Registrar.

²⁰⁷ unreported (Tompkins J., 23/4/86, High Court, Auckland, A 28/83).

²⁰⁸ Case name withheld at the request of the Christchurch District Court Registrar.

²⁰⁹ unreported (Wallace J., 20/10/83, High Court, Auckland, M 533/82).

questionable. Mr Sherwin, an expert witness who used the net assets and goodwill method, was criticised by Wallace J: (p.6)

... and because no allowance was made by Mr Sherwin for any normal deductions on the assets liquidation basis, I consider that his valuation must be put to one side.

In Chapter 3, it was argued that goodwill should not be used in conjunction with the notional liquidation method, consequently, Mr Sherwin's implementation of the goodwill and net assets method was correct. Clearly the decision by Wallace J. to use the notional liquidation method was one of judgment based on the facts (five out of the six expert witnesses had used this method). However, the inclusion of goodwill, and a profit to the purchaser, as with the case of *H v H*,²¹⁰ was illogical, given that the goodwill of the firm would cease to exist upon liquidation. The use of a notional liquidation implies the firm will be wound up,²¹¹ however, Wallace J. places importance on a purchasers ability to increase the profitability of the company:²¹² (p.14)

Nevertheless, I consider that a purchaser would in fact be influenced on the question of goodwill by the conclusion that he could to some extent increase the profitability of the business. More importantly, I consider that in this area I am entitled to place some weight on the evidence from Mr Sherwin to the effect that, whatever the theoretical arguments as to whether payments of goodwill are justified, evidence from the marketplace indicates that goodwill payments are still being made in this licensed industry.

In six cases, goodwill was added to the net (tangible) assets of the firm. This is the traditional means by which to use the goodwill method, and as Chapter 3 describes, is a method by which to value companies as going-concerns. An example of the acceptance that goodwill and assets produces a going-concern value, was in the case

²¹⁰ Case name withheld at the request of the Christchurch District Court Registrar.

²¹¹ It was noted in Chapter 3 that the notional liquidation method may be appropriate where the earnings of the firm are very low. Under these circumstances, the earnings are considered so low that the firm should be liquidated.

²¹² The decision to consider future profits when the valuation method assumed the firm would be liquidated, must be queried. If future profits were relevant, then surely a going-concern valuation method was appropriate, for example, DCF analysis, or even, the goodwill and net assets approach of Mr Sherwin.

Clark v Clark,²¹³ where Tipping J. criticised the valuation method of one of the expert witnesses, Mr Purchas: (p.64,814)

... As to the method adopted by Mr Purchas he indicated that the assets plus goodwill approach might have some validity if the Company was likely to be sold as a going concern. Clearly there is no prospect on the evidence of that.

For the majority of the six goodwill cases, it was unclear how goodwill was determined. The most comprehensive ruling on the goodwill issue, was in *Wilkinson v Diprose*,²¹⁴ where MacCormick J. stated that for an antique dealership: (p.41)

One of the principles that I consider the Court should take into account, in arriving at a goodwill figure, is that benefit of tenancy and goodwill are closely interrelated. If the premises from which a business is currently being operated have no security of tenure, such that the business may not be able to operate from its current location, then goodwill will be substantially affected if not eliminated entirely . . .

Another element or principle in the valuation of goodwill is that the figure for goodwill must represent the payment of something for super profits, ie for profits in excess of what one might pay as a salary for the operation of the business . . .

Lastly, . . . must be the factor that for this particular type of business goodwill is strongly associated with the expertise of the proprietor rather than with name or location of premises. Any existing goodwill could disappear overnight with an inexperienced new proprietor . . .

In this case it is clear that goodwill was viewed as an asset to be valued individually (see Chapter 3).

Dividend Based Methods

Dividend approaches were considered in 7 cases (13.7% of Table 23), and were the primary methods in 7 of the expert witness valuations (5.9% of Table 24). The method was always described as the dividend yield model, however, no valuations used the dividend yield model described in Chapter 3 (the Gordon growth model).

²¹³ (1989) 4 NZCLC 64,809.

²¹⁴ (1987) 6 FRNZ 37.

In *Coleman v Myers*,²¹⁵ two of the expert witnesses (Mr Wilkinson and Dr Lau) considered comparable companies in their assessment of the dividend yield. Mahon J. described the process: (pp.259,261-262)

... The dividend-yield method involves comparison between the future dividend rate of the company under consideration and the actual dividend rate of a comparable company. For this purpose Mr Wilkinson selected New Zealand Breweries Ltd. which at the time had a dividend yield of 4.8 percent. Then he added to this percentage yield a further .5 percent to allow for the unlisted nature of C & E shares with consequent lack of convertibility and for the 93 percent distribution of profit due to high asset backing, and thus fixed a dividend yield of 5.3 percent as being appropriate to C & E.

... [In Dr Lau's] opinion ... on a dividend-yield basis the purchaser expecting a higher dividend yield than the average of the four comparable companies because of the ability of C & E to distribute all its profits by way of dividend due to the high asset-backing of the shares would expect 7 percent as opposed to the average yield in the four listed companies of 5.35 percent ...

However, this was the only dividend valuation where comparable companies were used. Such a method looks like a minority interest version of the PER approach, where dividend yield is substituted for the PER.

For the other cases that were found, variations on the dividend capitalisation model described in Chapter 3 were utilised. When using the dividend capitalisation model, the need to estimate maintainable dividends arises. In *Alpine Dairy Products Limited v Braddock*,²¹⁶ this was based predominantly on future maintainable earnings: (Henry J., p.6)

... Mr Braddock decided to adopt the dividend capitalisation method of valuation. As the income stream was totally dependent on AIL, an assessment was made of AIL's future maintainable after-tax earnings, which were assessed at \$5.4 million. Account was then taken of an agreement amongst the shareholders of AIL which provided for a dividend payout ratio of no greater than 60% and no less than 40%. The 60% payout ratio was adopted, from which AIL's after tax future maintainable dividends were assessed at \$3.24 million ...

²¹⁵ [1977] 2 NZLR 225.

²¹⁶ unreported (Henry J., 29/6/94, High Court, Auckland, CP.152/91).

In *Jackson v The Public Trustee*,²¹⁷ the dividend method is close to the CME method: (Rabone J., p.4)

In Mr Martin's opinion the dividend yield method was the appropriate method of the valuation of the shares. In his affidavit he said:

"The operating profit in the last two years has averaged \$4,389.00. Capitalising this profit out at 15% provides a value of shareholders funds of \$29,260.00. There are 700 Ordinary Shares presenting (sic) these funds, which gives a value per share of \$41.80"

An alternative approach, was used in *Clark v Clark*:²¹⁸ (Tipping J., p.64,814)

[Mr Sissons's] valuation was based on assessing the likely future maintainable dividend, calculating on the interest rate of money notionally borrowed to fund the purchase of the shares, bringing taxation into account and determining a period over which the purchaser would expect to have the debt on his shares eliminated out of dividends after paying tax and interest on the money borrowed. For the reasons stated in Mr Sissons' report that period was taken at five years and the rate of interest was taken at 14%. In other words Mr Sissons had adopted the view that a purchaser of the shares would wish to fund his purchase and eliminate the debt out of dividends over a five year period.

In *Oppenheimer New Zealand Ltd v Struthers*,²¹⁹ Doogue J. dismissed Mr Pope's valuation which used a dividend method. He stated that for an oppression case, it was not appropriate, and made reference to *Anderson's Company & Security Law* commentary, 1-410, which views companies as quasi partnerships:

With quasi partnerships there is a general rule that the minority interest will be valued on a pro rata basis, even though this rule is subject to fairness.

Pro rata valuation is one way of ensuring that the purchasing majority do not get an unfair advantage over a minority shareholder in a situation where that shareholder has been forced to sell.

A pro rata valuation may not be appropriate where the shares are acquired on the market (at a discount) and held as an investment with full knowledge of the minority status.

²¹⁷ unreported (Rabone J., 31/7/91, High Court, Wellington, CP.850/89).

²¹⁸ (1989) 4 NZCLC 64,809.

²¹⁹ [1994] MCLR 156.

Dividend approaches have not received strong support in the New Zealand Courts, nevertheless, they may be accepted as appropriate for valuing minority interest parcels of shares. This is consistent with the literature, although the dividend yield method preferred in Chapter 3 was not used.

Interestingly, in *Multiply v Old Mill Farm Ltd.*²²⁰ Barker J. emphasised the importance of dividends, despite the fact that neither of the expert witnesses used method: (p.260,765)

... A prudent purchaser does not buy shares in a going concern with a view to winding-up the company; therefore the more important enquiry is into a probable profit which the company may be reasonably expected to make in the future; dividends can only be paid out of profit and the prudent purchaser would be interested mainly in future dividends reasonably expected.

Hybrid Valuation Methods

Although a number of expert witnesses backed up their valuations with the use of other valuation methods, only two experts used a hybrid valuation method. In *D v D*²²¹ this method was applied by Mr Williams: (Inglis J., p.7)

... First, he applied the earnings approach. By reference to actual profits ... and by calculating future maintainable profits he arrived at a valuation, as at the date of separation, of \$7.80 per share. Secondly, Mr Williams applied the net assets method by which he arrived at a valuation, as at the date of separation, of \$5.00 per share. Combining those methods he produced a valuation of \$6.00 per share, or \$135,000 for the husband's total shareholding.

The other case that used a hybrid method was *Thomas v H W Thomas Ltd.*²²² (Richardson J., p.690)

As is common in share valuations, Mr Wood assessed the value of Malcolm Thomas's shareholding on various bases ... On a net assets basis he arrived at a figure of \$175.27 per share ... On a capitalisation of profits basis he assessed the value of the shares at \$30 per share, and on a dividend

²²⁰ (1995) 7 NZCLC 260,746.

²²¹ Case name withheld at the request of the Christchurch District Court Registrar.

²²² [1984] 1 NZLR 686.

basis he assessed the value of the shares at \$25. On an overall view he settled on a figure of between \$120 and \$140 per share as the market value as at that date . . .

As was discussed in Chapter 3, the hybrid basis of valuation is a poor method, as it adds more judgment to a judgmental process. The lack of expert witnesses reports that have use this method in the New Zealand Courts is consistent with this realisation.

D. Compromise Decisions

This Section discusses the types of decisions Judges reached in the valuation of unlisted companies. For 17 of 51 (33.3%) cases from Database Two the Courts valued the firm according to the assessment of one of the expert witnesses. With the remaining 34 decisions (66.7%), some form of compromise decision was reached.

Generally, the Courts accept the view that the: “*Valuation of shares in a private company is said primarily to be a jury question . . .*” (Barker J., p.597).²²³ This is because the expertise exhibited by an expert witness in justifying their valuation will be paramount. No strict rulings have been made on how this “jury question” should be answered, with different Judges using different approaches, based on their own experience and knowledge.

This is understandable given the varying nature of cases, with different expert witnesses using different methods. Judges in New Zealand used four different methods in reaching compromise decisions:

- I. Averaging the valuations.
- II. Recalculating the valuation based on their own method.
- III. Recalculating the valuation based on expert witnesses valuations.
- IV. Weighting the valuation factors to arrive at an acceptable valuation.

²²³ *New Zealand Motor Bodies Ltd v Emslie* [1985] 2 NZLR 569.

I. Averaging the Valuations

Chapter 4 described how both Huggins (1973) and Englebrecht (1976) investigated the possibility that the Courts were simply averaging expert witness valuations. However, rarely in New Zealand did Judges simply average the valuations presented to them. One of the few examples where this method appears to have been taken, was in *Gamble v Gamble*:²²⁴ (Holland J., pp.16,17)

... The accountant for the wife values the shares at \$83,333, the accountant for the husband values the shares at \$15,046.56 ...

... I am satisfied that both accountants took views which were too extreme and too favourable to their clients. The shares in 63 Holdings Ltd are to be the property of the husband and he is to allow credit to his wife in respect of 45% of \$50,000 which I fix as the value of his shareholding.

This type of approach was criticised in another case, *Crichton v Crichton*.²²⁵ The initial decision by a Family Court Judge, was overturned on appeal by Jeffries J.: (p.534)

... It is true that the Judge in his judgment mentioned what he termed as possible scenarios for the disposal of shares, but in the end I think there is justification for the criticism that the Judge did not grapple at close quarters with the conflict and say which expert he preferred and why. Mr Macfarlane tried to counter this criticism by stating that in effect the Judge impliedly said he would not accept either valuation and choose to split their valuations almost exactly, although he did not say that was what he was doing ...

Duly qualified experts are entitled to give their opinions on questions in dispute in a trial. It is the Court's task to resolve conflicts that exist in the testimony of expert witnesses and that very often is a difficult task, but nevertheless must unambiguously be faced. The expert testimony must be weighed one opinion against another and in doing so the relative qualifications and credibility of the expert witnesses, as well as the reasons for each opinion and the fact and other matters on which it is based must be scrutinised. Finally, a Court is not bound to accept any expert opinion, but should give such weight and value as it is entitled to receive.

²²⁴ unreported (Holland J., 17/6/85, High Court, Christchurch, M.218/84).

²²⁵ [1991] NZFLR 529.

Adopting the foregoing approach I have examined the evidence of the opposing experts and think the conflict is too fundamental to resolve simply by splitting their respective valuations.

II. Recalculating the valuation based on their own method

Occasionally, Judges applied their own valuation methods to the case. For example, in *Brigham v Brigham*,²²⁶ and *Page v Page*²²⁷ the respective Judges choose to ignore liquidation costs, effectively changing the valuation methods from the liquidation approach of the expert witnesses to net assets. In *Wilkinson v Diprose*,²²⁸ MacCormick J. did not even require expert testimony in making his valuation assessment, ultimately at a net asset value: (p.41)

Taking all these factors into account I cannot accept that the business has any goodwill value at all. Although it may be a relatively unusual step to actually determine a value in the absence of expert evidence, I am in this case prepared to do so. I find the goodwill to have a nil value.

III. Recalculating the valuation based on expert witness valuations

Sometimes, Judges made very specific decisions, drawing out what they felt to be the best aspects of each experts valuation. For example, in *G v G*,²²⁹ Strettell J. discussed in detail how the estimated maintainable earnings and capitalisation rate should have been calculated, given that the CME method was appropriate. Based on the two expert witness reports that he received, the expert witnesses were directed to prepare a valuation following his instructions: (Strettell J., p.20)

In summary therefore the value of the shares is to be determined as the average of the '93, '92 and '91 net income returns of the company. There is to be no add-on of an assessment of surplus assets, and a figure of 20% is to be used as the capitalisation rate figure.

²²⁶ unreported (Tompkins J., 23/4/86, High Court, Auckland, A 28/83).

²²⁷ (1981) 5 MPC 114.

²²⁸ (1987) 6 FRNZ 37.

²²⁹ Case name withheld at the request of the Christchurch District Court Registrar.

Having regard to the fact that only draft accounts for the '93 tax year were available at the hearing, I propose to allow the parties following those directions to prepare an appropriate calculation of the value of the shares taking into account my findings once the approved '93 accounts are available.

However, this type of valuation was criticised in *Lusk v Archive Security Limited*,²³⁰ where Gallen J. warned against the acceptance or rejection of parts of a valuation: (p.66,992)

The question of valuation of shares has been the subject of a number of decisions in the Courts and always creates great difficulty when persons of status and experience come to different conclusions. There is ample authority to establish that valuations are not a matter of exact science and not infrequently mathematical calculations produce an authoritative result which is in fact totally dependent on bases that are not capable of mathematical demonstration. Unfortunately valuations are also made in the round. Accepting or rejecting certain aspects of them rarely allows for a recalculation in which confidence may be placed and may in fact involve a distortion since valuers in the end will have arrived at their result on an overall assessment and will have consciously or unconsciously placed or removed an emphasis on certain aspects.

IV. Weighting valuation factors to arrive at the valuation

The most common method in the Courts, was for Judges to weight the various valuations according to the factors they deemed appropriate. The factors that were considered important by these Judges are discussed in the next Section. This approach was considered the correct method in the Court of Appeal by Cooke P., who, in a classic statement which is often quoted in other judgments, dismissed any suggestion of a formula method being appropriate. Cooke P. emphasised the importance of considering the relevant factors: (Holt v Holt, p.90)²³¹

Among some accountants and lawyers, on or off the Bench, there seems to be a persistent disinclination to accept, or at any rate act on, the principle of such decisions. It may reflect a yearning for the certainty of rules of thumb, or a sense that shares and other items of property must have an intrinsic value capable of being revealed by some formula. The latter, however, is an illusion. Money value is simply what is obtainable in an actual or notional market. In some case, such as shares quoted on the stock

²³⁰ (1991) 5 NZCLC 66,979.

²³¹ [1987] 1 NZLR 85 (CA).

exchange, it is easily ascertained. At the other extreme are cases where the valuer can do little more than identify the factors likely to influence the parties in bargaining for a fair price in a friendly negotiation, and then arrive at a discretionary judgment.

In *Pountney v Pountney*,²³² Hardie Boys J. described how the Courts are reluctant to overturn decisions which follow these principles: (p.28)

... This Court will naturally be reluctant to differ from what was a conclusion of fact reached by a Judge who had the advantage of seeing and hearing the valuers as they gave their evidence and were cross-examined extensively upon it.

E. Valuation Factors

Chapter 4 discussed the important information factors for valuations. Unlike the situation in the United States of America (US), no clear attempt has been made by the Courts to define the appropriate factors for valuations.²³³ This is not to say that the New Zealand Courts do not comment on particular valuation factors in particular cases. However, the New Zealand Courts have not developed strong authorities through case law, or otherwise, which state the information that should be utilised by expert witnesses.

It has proven difficult to summarise the factors that the Courts consider important in New Zealand, because of the lack of emphasis placed upon them. Some of the factors which were considered relevant in estimating maintainable earnings and the capitalisation rate under the CME method were discussed in Sub-Section C-III-b. In *Jamieson v Cox*,²³⁴ both expert witnesses referred to the factors they took into account when assessing the capitalisation rate in a CME valuation. The expert witness Mr

²³² unreported (Hardie Boys, McKay, Casey JJ., 20/09/91, Court of Appeal, CA 45/91).

²³³ See Chapter 4, which describes the research that has summarised the factors considered in the US Courts.

²³⁴ [1990] NZFLR 165.

Hagen, although not willing to state the weight applied to the factors, suggested these included: (Richardson J., p.168)

- I. the lack of negotiability for unlisted shares in private companies;
- II. the company's net asset backing;
- III. its apparent strong liquidity position;
- IV. the relatively small size of the company;
- V. the risks arising from a narrow product base and a small number of customers;
- VI. the companies reliance on the husband and his engineering and marketing skills in particular;
- VII. the difficulties associated with selling an engineering business in the Tokoroa area;
- VIII. the growth rate of the company; and,
- IX. the notional sale was 100% of the shareholding rather than a minority interest.

By contrast, Mr Dobson allowed for fewer factors in his valuation, using them to adjust the risk free rate of 13%: (Richardson J., p.168)

- I. lack of security and size;
- II. lack of negotiability;
- III. reliance on the expertise of the proprietor; and,
- IV. the particular position of Tokoroa and the product and customer base.

As was discussed in Section C-III-b, the Court of Appeal overturned Gallen J.'s preference for Mr Dobson's valuation on the grounds that Mr Dobson had not adequately accounted for the growth factor.

Although in a number of cases valuation experts referred to the relevant factors (although these were not always reported in the judgment), it was less common for Judges to bring up the question of the relevant factors. One recent example where this

did happen, was in *Multiply v Old Mill Farm Ltd*,²³⁵ where Barker J. summarised case law and stated that: (p.260,765)

... The value that the shares may have to a limited number of purchasers or to an available sole purchaser is a factor which must be taken into account. The Court must take into account all matters which would influence a potential purchaser including the earnings and dividend record of the company, the company's business, its likelihood of future profits, the classes of potential buyers of shares, the nature of the company's assets and whether these are easily converted into cash.

However, this statement apparently comes directly from the earlier ruling by McCarthy and Turner JJ. in the *Hatrick*²³⁶ case that: (p.93)

... Each method of approach, and whether more than one should be applied, depends in each case on the circumstances which will include the type of business which the company conducts, its record of earnings and dividends, its likelihood of future profits, the classes of potential buyers of the particular shares, the extent of those classes, the nature of the assets of the company, and whether those assets are readily convertible to cash...

It is interesting to compare these factors with those that are considered appropriate in the US Courts, particularly with reference to Revenue Ruling 59-60.²³⁷ Two factors from *Hatrick*²³⁸ are consistent with Revenue Ruling 59-60: the type of business which the company conducts, and to a lesser extent, the likelihood of future profits (earning capacity of the company in Revenue Ruling 59-60). Additionally, North American research on Court decisions has confirmed that historical earnings is a very important factor. Dividends paid, marketability, and assets value (although this was sometimes classified as book value, which is different), were also important in US Court decisions. Interestingly, the US Courts rarely commented on the classes of potential buyers of the shares (see Chapter 4).

The absence of Court rulings in New Zealand which have focused on the factors which are important in the valuation of unlisted shares is unfortunate considering the

²³⁵ (1995) 7 NZCLC 260,746.

²³⁶ *Hatrick v CIR* [1963] NZLR 641. This chapter quotes from a reprint in Blair (1990).

²³⁷ See Chapter 4, Table 10.

²³⁸ *Hatrick v CIR* [1963] NZLR 641. This chapter quotes from a reprint in Blair (1990).

vast array of North American research on the topic (see Chapter 4). Greater guidance in the Courts as to the appropriate information to use, would assist in ensuring that expert witnesses consider information which has been found to be important internationally.

F. Chapter Summary

This Chapter has presented the results of this thesis on the basis of the data that was discussed in Chapter 6. These results are the first significant empirical research into the valuation of unlisted companies in New Zealand.

Generally the Courts followed the *Hatrick*²³⁹ test when defining value. The only two exceptions were with some of the matrimonial property cases where notional liquidation was not accepted, and compulsory acquisition in oppression cases where the position of the parties was occasionally considered.

With 44.5% of the valuations examined, the expert witness had been involved in more than one valuation in the total sample of cases examined. Mr Hagen, who undertook the most valuations, showed a preference for the CME method. The Courts often alluded to the experience and reputation of the expert witnesses. All the expert witnesses who had their qualifications discussed came from an accounting background.

Most of the cases before the New Zealand Courts involve matrimonial property valuations (73.3%). The other three types of case found were oppression, negligence and estate. No differences were found between open and notional valuations.

On 10 occasions Court judgments on the valuation of unlisted companies were taken to appeal. Twice these appeals successful. The Courts showed a reluctance to overturn lower Court Judges unless the valuation exercise was not considered in detail, or an important factor had not received sufficient weight.

²³⁹ *Hatrick v CIR* [1963] NZLR 641.

Asset valuation methods are apparently favoured for farming companies, however, there was no other evidence of industry differences affecting the valuation judgment obtained.

It is unclear whether the particular party, Judge, or other external variables affected the judgments reached. A different research method would be needed to investigate this in detail.

The most popular valuation methods in the New Zealand Courts are: notional liquidation, capitalised maintainable earnings (CME), net assets and dividend based. 82.1% of cases discussed either CMEs or notional liquidation, and 66.4% of expert witness valuations used one of these two methods.

For the 33.3% of cases where the Courts did favour one particular expert witness, the preferred method by the Courts was capitalised maintainable earnings, followed by notional liquidation. This reflects the Courts desire for going-concern valuations where possible.

The Courts did not specifically approve of the DCF method in the three cases where it was used. In one case it was criticised by the Judge as an inappropriate method for the valuation of unlisted companies. There was only one case where the capital asset pricing model (CAPM) was utilised. The technique itself was not criticised, but it was implemented incompetently.

As with the literature, there is uncertainty in the Courts regarding the CME method. In particular, there was debate over whether future information should be included in maintainable earnings. When calculating maintainable earnings, the Courts have shown a preference for data that is derived from longer, rather than shorter, time periods.

The capitalisation rates assessed under the CME method were very judgmental in nature, with different expert witnesses coming to significantly different conclusions. Additionally, the terminology was used loosely. Capitalisation rates were often described as PERs, even though comparable companies were not used to estimate them.

In the two cases which discussed surplus assets, the Courts ruled that there were no surplus assets in the firms concerned.

The lack of clear guidelines concerning how the CME method should be implemented, has not assisted in reducing the uncertainties present in the valuation of unlisted companies. Accepted definitions of the inputs, and how they should be calculated, are absent.

Only one case used price earnings ratios (PER) based on comparable companies. This cases involved an Australian expert witness, no New Zealand expert witnesses advocated this method.

Notional liquidation is the primary asset-based valuation method that is used in the New Zealand Courts. Debate still exists over whether it is an appropriate method for matrimonial property disputes, however, only three cases did not support the method.

Goodwill was added to net assets by six expert witnesses to provide going-concern valuations. In only one of these cases was it stated how the goodwill figure should be calculated. Occasionally goodwill was included in a notional liquidation valuation. This must be queried, because the presence of goodwill implies the firm will continue as a going-concern.

Dividend methods were used mainly for minority interests, as is suggested in the literature. No consistent way to implement the dividend method was found in the judgments examined. The dividend yield method preferred in Chapter 3 was not used, although in the New Zealand Courts the valuations were always described as having followed the dividend yield model.

Although valuation experts occasionally backed up their findings with other valuation methods, only two expert witnesses used the hybrid valuation method.

For 66.7% of the cases, the Courts reached some form of compromise decision, with none of the expert witnesses valuations accepted. It was uncommon for the Courts to simply average the valuations. Generally, the Courts hold the view that the:

“Valuation of shares in a private company is said primarily to be a jury question . . .” (Barker J., p.597).²⁴⁰ This is because the expertise exhibited by an expert witness in justifying their valuation will be paramount. No strict rulings have been made on how this “jury question” should be answered, with different Judges using different approaches, based on their own experience and knowledge.

Judges in New Zealand consistently emphasise the importance of meeting the *Hatrick*²⁴¹ test ahead of the valuation method used. However, rarely do the New Zealand Courts enunciate specifically on the valuation factors that are important in the valuation of unlisted companies. This is in contrast to North America where defining the valuation factors is of prime importance. The advantage of the North American approach, is that it assists in ensuring that expert witnesses consider information which has been found to be important in the valuation of unlisted companies.

²⁴⁰ *New Zealand Motor Bodies Ltd v Emslie* [1985] 2 NZLR 569.

²⁴¹ *Hatrick v CIR* [1963] NZLR 641.

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A. Introduction

*Put in a place
Where it's easy to see
the cryptic admonishment
T.T.T.*

*When you feel how depressingly
slowly you climb,
it's well to remember that
Things Take Time*

Piet Hein (1995, p.5)

The conclusions of this thesis are presented in this Chapter. First, recommendations to the Institute of Chartered Accountants of New Zealand (ICANZ) are stated. This is followed by the limitations of the thesis, and suggestions for further research. Finally, a brief conclusion summarises this thesis.

B. Recommendations

The Courts in New Zealand rely upon the evidence presented by expert witnesses.²⁴² It is unreasonable to expect that Judges gain expertise in such a technical field. Chapter 7 showed that most of the expert witnesses valuing unlisted companies are accountants. It is the responsibility of the Institute of Chartered Accountants of New Zealand (ICANZ) to ensure that its members are educated in the latest professional developments. Consequently, the recommendations of this thesis are primarily directed towards the ICANZ.²⁴³

²⁴² See Chapter 2.

²⁴³ The ICANZ was known as the New Zealand Society of Accountants (NZS. .) before 1 October 1996.

This Section is spilt into two categories. The first discusses the education programmes run by the ICANZ. The second suggests areas for guidelines from the ICANZ for the valuation of unlisted companies.

I. Education

The ICANZ holds frequent seminars and regularly produces guidebooks for continuing education papers on the valuation of unlisted companies.²⁴⁴ The most recent of these was written by Burn (1995). However, it makes scant mention of discounted cash flow (DCF) analysis and modern finance techniques, and presents the traditional view that capitalised maintainable earnings (CME) and notional liquidation are adequate methods.

It is disturbing that there is very little literature in New Zealand discussing (or advocating) DCF analysis.²⁴⁵ This is despite a growing body of theoretical literature internationally, and the acceptance of DCF analysis in overseas Courts.²⁴⁶ Students educated in finance in recent years will have difficulty understanding why the ICANZ continues to recommend outmoded valuation techniques (such as CMEs).

The ICANZ hires experts with considerable experience to write their continuing education papers, and chair their seminars. This experience is of value, however, these experts may have an incentive to maintain the status quo. They present the methods that will most likely to succeed in the New Zealand Courts (CMEs and notional liquidation).²⁴⁷ There is virtually no incentive for them to discuss modern techniques, despite their theoretical superiority.²⁴⁸ Additionally, these expert witnesses may have little knowledge of modern finance methods and no experience in using them.

²⁴⁴ See Chapter 2.

²⁴⁵ See Chapter 4.

²⁴⁶ See Chapter 4.

²⁴⁷ See Chapter 7.

²⁴⁸ Particularly as DCF analysis has not yet been accepted in the New Zealand Courts for the valuation of unlisted companies.

Rather than provide similar texts every few years for continuing education purposes, it would be preferable if the ICANZ required that the basics of modern financial theory be included in their courses on the valuation of unlisted companies. Furthermore, it would be valuable if the ICANZ was to hire speakers who know modern finance theory and have experience in using it. This could include merchant bankers, New Zealand Treasury analysts or North American valuers.

II. Guidelines

The ICANZ needs to stimulate debate and raise standards in the unlisted company valuation field. The absence of New Zealand literature advocating modern finance methods (both in legal and accounting journals) is an indication that professional bodies are not giving sufficient attention to the valuation of unlisted companies.

The development of formal guidelines by the ICANZ would give valuers and the Courts a common framework for assessing the valuation of unlisted companies. This Sub-Section has been split into four areas where the ICANZ could develop guidelines: suitable valuation methods, definition of valuation methods, purpose of valuation and valuation factors.

a. Suitable Valuation Methods

Ideally, a guideline could be devised by the ICANZ whereby DCF analysis is the primary valuation method for going-concern companies, and notional liquidation for non-going-concern companies (another guideline would be needed for valuing minority interests). Such a guideline would ensure consistency among valuation experts. The Courts would then be able to assess valuations on the basis of the assumptions made, rather than the valuation methods used.

The valuation methods appropriate for going-concern and non-going-concern companies and minority interests will now be discussed in more detail.

Going-Concern Companies

DCF analysis is posited by this thesis as being the best method to value unlisted companies as going-concerns. It has the following advantages over traditional valuation methods (see Chapter 3 for an in-depth discussion):

- I. *Inputs clearly defined:* The inputs into a DCF valuation are well defined. Over a given time period, cash flows will represent the benefits accruing to the investor. The discount rate will be the required rate of return for the level of risk in the cash flows.
- II. *Utilises cash flows:* Economic reality dictates that investors assess returns and company values in terms of cash flows, not accounting measures (Brown, 1991). Arbitrary accounting concepts, such as depreciation, should have no affect on the value of company, with the exception of their impact on taxation (a cash outflow). Only in the long term are cash flows reconcilable with profits: (Gregory and Hicks, 1995, p.64)

Although over the life of the company, the sum of the net cash flows must equal the sum of the accounting profits, on a year by year basis, the two can be radically different . . . in essence, accounting profits smooth lumpy cash flows over time. However, the cost of money relates to cash flows, not profit flows.

- III. *Required return explicitly stated:* The required rate of return (discount rate) for a given level of risk in a company will be explicitly stated. This ensures the possibility that returns may not be eventuate will have been considered (Brown, 1991).
- IV. *Assumptions made visible:* Under DCF analysis, the assumptions that have been imputed into the model, will need to be made clear. For example, Hubbard (1990, pp.36-37) suggests those should include: inflation levels, sales growth rates, market growth or market share, future investment required (including working capital), tax rates, exchange rates, period of analysis, residual value, and existing debt.
- V. *Encourages detailed analysis:* Because the assessment of the future cash flows will need to be justified, valuers are encouraged to analyse the company to be valued in detail. Unlike many of the traditional valuation techniques (that are discussed in Chapter 3): “Discounted cash flow analysis makes specific allowance for market factors assumed to be implied in capitalising profits or dividends . . .” (Brown, 1991, p.9).

The New Zealand Courts have not ruled that discounted cash flow analysis is an acceptable means by which to value unlisted companies. Conflicting judgments do little

to inspire confidence in the method. In *Lusk v Archive Security Limited*,²⁴⁹ Gallen J. stated that it may be an appropriate method for large diversified companies. However, in *Multiply v Old Mill Farm & Ors*²⁵⁰ Barker J. dismissed the method as unreliable.²⁵¹

The New Zealand Courts have shown a preference for capitalised maintainable earnings (CME) in the valuation of going-concerns.²⁵² However, although there is legal precedent to support CMEs, Chapter 3 showed it is inferior to the modern method of DCF analysis. Nevertheless, the acceptance of this method is not surprising given that it is the most popular technique used by valuation experts,²⁵³ and is still supported in most of the New Zealand literature.²⁵⁴

The ICANZ needs to highlight that there is international precedent for the acceptance by the Courts of DCF analysis. Courts in the United States of America considered DCF analysis as early as the 1950's, whilst Canadian Courts explicitly approved DCF analysis in 1987.²⁵⁵ As more expert witnesses with commercial experience of DCF analysis testify, the need for the Courts to specifically approve DCF analysis is increasing. By setting a guideline that recognises that DCF analysis is a suitable (if not the best) method for valuing unlisted companies as going-concerns, the ICANZ would send a clear message to valuers and the Courts.

Non-Going-Concern Companies

Although DCF analysis is appropriate for going-concern companies, an asset based approach may be more suitable where a company is likely to be liquidated (or has earnings so low, that it should be liquidated).

²⁴⁹ (1991) 5 NZCLC 66,979.

²⁵⁰ (1995) 7 NZCLC 260,746.

²⁵¹ See Chapter 7.

²⁵² See Chapter 7.

²⁵³ See Chapter 7.

²⁵⁴ See Chapter 4.

²⁵⁵ See Chapter 4.

The New Zealand Courts quickly accepted that the assets approach should only be used where a liquidation is likely (*Keesing Anor v The Commissioner of Stamp Duties*).²⁵⁶ When an assets approach to valuation is used, it is necessarily the notional liquidation method (*New Zealand Insurance Company, Limited v CIR*).²⁵⁷ Discounts for the risks of realisation and reinvestment may be appropriate (*New Zealand Insurance Company, Limited v CIR*). Additionally, deductions for a profit to the purchaser and taxation losses are accepted practice (*Holt*).²⁵⁸

The notional liquidation method is simple and is the logical choice for non-going-concern companies. It can be reconciled with DCF analysis, because when there are very low earnings, liquidating the firm may maximise cash flows to the owner.²⁵⁹

Chapters 3 and 7 highlighted that care needs to be taken to ensure that the notional liquidation method is not confused with going-concern valuations by the inclusion of goodwill. The traditional valuation method of goodwill and net assets results in a going-concern valuation, with goodwill representing the prospect of future profits. However, there will be no future profits on the liquidation of the firm (beyond the profit to the purchaser that is already accounted for under the notional liquidation method).

Minority Interests

A judgmental issue is the valuation of a minority interest parcel of shares, rather than the entire company. The ICANZ could issue a statement that recommends that the DCF approach should be used, with a discount or premium calculated for the minority interests. If the company is deemed a going-concern, the following possibilities may influence the size of any discount or premium to be applied: (from Chapter 3)

- I. there should be a discount for a minority interest because of a lack of marketability, and liquidity of the shares (Wise, 1989);

²⁵⁶ [1935] GLR 58.

²⁵⁷ [1956] NZLR 501.

²⁵⁸ [1985] 3 NZCLC 100,096 (HC), [1987] 1 NZLR 85 (CA), [1990] 3 NZLR 401 (PC).

²⁵⁹ See Chapter 3.

- II. there should be a discount for a minority interest, due to a lack of control over the management of the firm (Wise, 1989);
- III. a particular class of share may deserve a premium or discount because of its attributes;²⁶⁰ and,
- IV. there should be a premium for a minority interest, recognising the strategic value of such a block of shares, as the removal of a minority shareholder may reduce the running costs of the organisation.²⁶¹

Alternatively, a dividend based model may be considered more appropriate. Clear advice by the ICANZ on how such a method should be implemented would then be useful. There is little consistency in the New Zealand Courts as to how dividend approaches should be implemented.²⁶² The dividend yield model was recommended by this thesis in Chapter 3, as it does not use the “maintainable” concept.

b. Definition of Valuation Methods

The literature clearly defines DCF analysis and the notional liquidation method. By contrast, there is less consensus in the literature (both in New Zealand and internationally) as to what the various traditional valuation methods are, and how they should be implemented.

Chapter 7 highlighted that there is also confusion in the New Zealand Courts as to the definition of various valuation methods. For example, the price earnings ratio (PER) method has often been confused with capitalised maintainable earnings (CMEs). Additionally, valuations were often incorrectly described as having used the dividend yield method, instead of the dividend capitalisation method.

Unless expert witnesses are encouraged to standardise the methods they use, the Courts will continue to have to deal with a variety of misnamed valuation methods. In a field as important as the valuation of unlisted companies, it is remarkable that expert witnesses will often present valuations which are not what they purport to be.

²⁶⁰ An example of this is *Holt v Holt* [1990] 4 NZFLR 339, which is discussed in Chapter 5.

²⁶¹ This recent consideration is illustrated in an Australian case, reviewed by Corrigan (1995).

²⁶² See Chapter 7.

The ICANZ provides continuing education booklets, but these have not had the desired affect of standardising the methods used by the valuers of unlisted companies. The development of standard terms and methods through a formal guideline set by the ICANZ would benefit all in the field. For example, the differences between the PER, CMEs, dividend yield and dividend capitalisation methods could be clarified. Expert witnesses should not be allowed to confuse these methods by modifying them haphazardly in the Courts.

c. Purpose of Valuation

Chapter 7 found that expert witnesses often do not deduct liquidation expenses when conducting matrimonial property valuations. In these cases the purpose for the valuation has affected the valuation undertaken.²⁶³

It is posited in this thesis that the valuation of unlisted companies should not be biased by the purpose (for example, matrimonial property or estate) of the valuation. The advantage of this approach, is it allows business valuation experts to approach the assessment to be undertaken from the same basis. They do not require specialist knowledge of the particular law under which the valuation is required (for example, negligence). The Courts have ample opportunity to adjust any award for damages on the basis of equity later in their judgment. Equity should not affect the actual valuation of the company.²⁶⁴ Many Judges are beginning to accept this reality, for example, Wallace J. in *Harlick v Harlick*.²⁶⁵

... I therefore do not consider that it is open to the Court, when it is accepted that the assets liquidation method is appropriate, to adopt some modified form of that method in the case of shares which are matrimonial property; and in any event, to do so could lead to considerable confusion. Moreover, I do not think it is necessary to endeavour to modify the method in order to achieve justice in most matrimonial property cases ...

²⁶³ See Chapters 2, 3 and 7.

²⁶⁴ There is enough debate on the correct way to value an unlisted company without adding the complication of assessing equity. Judges are more experienced than valuation experts on this issue.

²⁶⁵ unreported (Wallace J., 20/10/83, High Court, Auckland, M 533/82).

The ICANZ needs to encourage that valuers do not adjust their valuations because a particular case is for matrimonial property purposes. The non-deduction of liquidation expenses for non-going-concern companies is a practice that needs to be discouraged.

d. Valuation Factors

The biggest advantage of DCF analysis is it highlights the assumptions, by way of valuation factors, that have gone into an unlisted company valuation. However, regardless of the valuation method used, information will need to be obtained and assessed in any valuation.

Chapter 7 found that the New Zealand Courts have not given valuation factors the same emphasis as the Courts in North America. The few judgments that have discussed the relevant factors have tended to simply restate the suggestions offered in the judgment of *Hatrick*²⁶⁶ (see Chapter 7).

It is recommended by this thesis that the ICANZ release a guideline of relevant valuation factors. Such a guideline would assist in ensuring that expert witnesses have considered all the relevant information. Additionally, a guideline would give Judges a common framework from which to assess the assumptions made by different expert witnesses.

This guideline could be based on previous research in the field,²⁶⁷ perhaps similar to that displayed in Table 27 by the American Society of Appraisers (ASA). Alternatively, it may be appropriate to contact relevant parties (such as existing expert witnesses) to assist in devising a suitable guideline for New Zealand.

²⁶⁶ *Hatrick v CIR* [1963] NZLR 641. This chapter quotes from a reprint in Blair (1990).

²⁶⁷ See Chapter 4.

Table 27: Information Collection and Analysis (ASA, 1992, Chapter 4)²⁶⁸

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- | | |
|----|---|
| A. | Characteristics of the business, business ownership interest or security to be valued including rights, privileges and conditions, quantity, factors affecting control and agreements restricting sale or transfer. |
| B. | Nature, history and outlook of the business. |
| C. | Historical financial information for the business. |
| D. | Assets and liabilities of the business. |
| E. | Nature and conditions of the relevant industries which have an impact on the business. |
| F. | Economic factors affecting the business. |
| G. | Capital markets providing relevant information, e.g. available rate of return on alternative investments, relevant public stock transactions, and relevant mergers and acquisitions. |
| H. | Prior transactions involving the subject business interest in the subject business, or its securities. |
| I. | Other information deemed by the appraiser to be relevant. |
-

C. Limitations

The limitations of this thesis were discussed in detail in Chapter 6. Specifically, the following limitations are present from the research undertaken:

- I. *The findings are limited to the valuation of unlisted companies undertaken in the New Zealand Courts:* Without further research in New Zealand, the results cannot be extended beyond the Courts. Madeo (1979, p.551) discussed why this is the case with tax research:

The study was also limited in that it was based on cases tried in Court (the only available published data). There are many opportunities prior to a court appearance for the parties to compromise. Taxpayers with weak cases may be more likely to compromise than to proceed to court. On the other hand, such taxpayers may feel that they will have a more sympathetic hearing from a judge than from IRS representatives. Given the lack of available data one can only speculate as to the possible bias introduced by limiting the study to cases tried in the court

- II. *Judgments were relied upon as accurate recordings of events in the Courts:* Judges may not be familiar with normal business valuation terms. Their judgments may report and weight various methods and factors in a different manner to that prescribed in the valuation literature. Reliance on these judgments is a limitation of the legal review method. This was discussed by Madeo (1979, p.551) in his tax research:

²⁶⁸ This is the same as Table 15 in Chapter 4.

It is possible that the Tax Court has based its decisions on some factors not mentioned in either the regulations or the IRS Audit Guidelines. One such factor is the skill and expertise of the attorneys involved in representing the positions of the government and the taxpayer corporation. Additionally, the study was based on the printed opinions of Tax Court judges. These opinions are, in effect, justifications for the decisions of the court and may select from available materials those factors which support the decision

- III. *Not all cases may have been obtained in the period considered:* Whilst an exhaustive search for cases was made, it is likely that some were not obtained. This is not considered a serious limitation, as it is questionable if any search technique would find them all. If any important cases were missed, they were missed on a random basis. An adequate sample was obtained (the sample was discussed in more detail in Chapter 6).

D. Further Research

Chapter 6 discussed the dearth of research on unlisted companies both in New Zealand, and internationally. The possibilities for further research are considerable. Some ideas include:

- I. *An extension of the findings of this thesis beyond the Courts:* This could be achieved through the use of the survey method (see Chapter 6). The valuers of unlisted companies (predominantly accountants in New Zealand, see Chapter 7), could be questioned on the methods and techniques they are employing.
- II. *A closer examination of the process of valuing unlisted companies:* The method used in valuations would be examined in greater detail. This research could be undertaken by way of a survey like that of Keane (1992),²⁶⁹ or alternatively, through the use of the case study method. Another possibility might be an experiment involving valuation experts.
- III. *A closer investigation into the factors used in valuation:* This research might be based along the lines of Pike, Sharp and Kantor (1988)²⁷⁰ who studied the extent to which accounting data can predict valuation figures.

²⁶⁹ See Chapter 4.

²⁷⁰ See Chapter 4.

- IV. *An attempt to standardise valuation terms:* Section B-II-b of this Chapter discussed the lack of consistency in valuation terms throughout the literature. Standard definitions would assist all in the field.
- V. *A closer examination of any industry impact on valuations:* For example, in New Zealand it would be possible to research the valuation of farming companies in greater detail.
- VI. *An investigation into the existence of liquidity discounts in New Zealand:* There has been very little research in New Zealand that has investigated the extent to which unlisted companies are discounted compared to listed companies. Such research could examine price changes on recently listed companies from their last unlisted sales.
- VII. *Further research into the issue of goodwill:* Goodwill is a difficult subject not just for the valuation of unlisted companies. This research could focus on understanding the relevant issues that should be taken into account in establishing a goodwill figure.

E. Thesis Conclusion

This thesis provides the first significant empirical research into the valuation of unlisted companies in New Zealand. The legal review method was chosen as it provides a broad descriptive data base from which further research can develop. A simple analytical count was used, providing valuable statistics on the practices of a large sample of New Zealand valuers and the Courts. This was followed by a more in depth analysis. A nineteen year period, from the inception of the Matrimonial Property Act (1976) was deemed suitable. Cases were searched for, and found, predominantly through the use of computer databases. All cases found were collected.

The bulk of companies in New Zealand are unlisted (99.9%). These companies may require the services of valuation experts to place a value on their shares; and were the subject of this thesis. Value is a matter of perception, and therefore is difficult to define. However, internationally the Courts have developed a widely accepted definition for the valuation of unlisted companies — the value that would be negotiated by a willing but not anxious purchaser and a willing but not anxious seller. Generally,

the New Zealand Courts (*In re Monro: Turnbull v The Commissioner of Stamp Duties*²⁷¹ and *Hatrick*²⁷²) have agreed with these overseas authorities. The only two exceptions were with some of the matrimonial property cases where notional liquidation was not accepted, and compulsory acquisition in oppression cases where the position of the parties was occasionally considered. These two exceptions have been questioned by this thesis, and in the Courts.

The valuation of unlisted companies is a specialist field. As such, the Courts will normally consider expert evidence. With 44.5% of the valuations examined, the expert witness had been involved in more than one valuation in the total sample of cases examined. Mr Hagen, who undertook the most valuations, showed a preference for the CME method. The Courts often alluded to the experience and reputation of the expert witnesses. All the expert witnesses who had their qualifications discussed came from an accounting background.

The New Zealand Courts have provided guidelines as to the correct method for a given business valuation case. Preference has been shown for an earnings approach to valuation (*Keesing v Commissioner of Stamp Duties*),²⁷³ with an assets approach only suitable where a liquidation is likely (*Keesing v Commissioner of Stamp Duties*). For the 33.3% of cases where the Courts did favour one particular expert witness, the preferred method by the Courts was capitalised maintainable earnings, followed by notional liquidation. This reflects the Courts desire for going-concern valuations where possible.

Discounted cash flow (DCF) analysis has been shown in Chapter 3 to be a superior means by which unlisted companies can be valued as going-concerns. DCF analysis can be considered both intuitively sensible, and theoretically sound. Many of the criticisms levelled at it in the literature, are criticisms that are equally applicable other traditional valuation methods. One of the biggest advantages of the DCF method, is that any of the assumptions made in the estimates which are imputed, will be readily

²⁷¹ [1944] GLR 58.

²⁷² *Hatrick v CIR* [1963] NZLR 641, and Blair (1990).

²⁷³ [1935] GLR 58.

apparent. This encourages valuation experts to undertake a comprehensive analysis, so they can justify the judgment calls they make.

The Courts in the United States of America and Canada have specifically accepted discounted cash flow analysis as an acceptable method in the valuation of unlisted companies. The New Zealand Courts did not specifically approve of the DCF method in the three cases where it was found to be used. In one case it was criticised by the Judge as an inappropriate method for the valuation of unlisted companies.

Capitalised maintainable earnings (CME) is a widely used traditional method by which a firm can be valued as a going-concern. When calculating maintainable earnings, the Courts have shown a preference for data that is derived from longer, rather than shorter, time periods. Unlike DCF analysis, the inputs into a valuation under CMEs are less clearly defined. As with the literature, there is uncertainty in the Courts regarding how the CME method should be implemented. In particular, there was debate over whether future information should be included in maintainable earnings. There has also been confusion between the price earnings ratio method and CMEs. The lack of standard definitions for these terms is a problem which future research could address.

This thesis has posited that the CME method is not easily reconcilable with DCF analysis, and is an inferior means by which to value unlisted companies. Despite this, CMEs has proven to be one of the two most popular valuation methods in the New Zealand Courts.

It is recommended by this thesis that the Institute of Chartered Accountants of New Zealand (ICANZ) update the skills of its members concerning the valuation of unlisted companies. When these members proceed to use modern finance methods in the Courts, Judges will also become better educated and deal with DCF analysis more seriously than they have done to date. The present method of hiring experienced expert witnesses to run courses may simply be reinforcing the use of unsuitable traditional valuation methods in New Zealand.

Asset based valuation methods provide a useful back up when calculating the value of the firm. It can be argued that theoretically they should be used when the value

of a firm's assets exceeds its going-concern value, in which instance the firm should be liquidated. Consequently, a company's liquidation value will be of interest to any potential purchaser. Notional liquidation has proven to be one of the two most popular valuation methods in the New Zealand Courts. It is recommended that the notional liquidation method continues to be the main valuation method for non-going-concern companies.

The need to value minority interests in an unlisted company is a further complication. Two methods exist. Companies can be valued in their entirety, with a subjective discount or premium applied to the value of the minority shares. Alternatively, a dividend model can be used to assess the future benefits accruing to the minority shareholder, if it is accepted that the shares are not readily marketable. With either method, the valuer's judgment will be a key factor.

For 66.7% of the cases, the Courts reached some form of compromise decision, with none of the expert witnesses' valuations accepted. It was uncommon for the Courts to simply average the valuations. Generally, the Courts hold the view that the: "*Valuation of shares in a private company is said primarily to be a jury question . . .*" (Barker J., p.597).²⁷⁴ This is because the expertise exhibited by an expert witness in justifying their valuation will be paramount. No strict rulings have been made on how this "jury question" should be answered, with different Judges using different approaches, based on their own experience and knowledge. This thesis supports the Courts' favoured approach of weighting the various valuation factors according to the evidence.

North American research has shown the importance, in particular, of four key valuation factors: expert testimony, prior sales of stock, historical earnings and the book value of assets. These factors are regularly commented upon in the North American Courts, which suggests Judges are basing their decisions upon this information; after assessing the expert evidence. Little emphasis is placed by the New Zealand Courts on enunciating the valuation factors that are important in the valuation of unlisted

²⁷⁴ *New Zealand Motor Bodies Ltd v Emslie* [1985] 2 NZLR 569.

companies. Most statements by Judges simply follow the wisdom of the *Hatrick*²⁷⁵ case, which emphasised the importance of identifying the factors in a valuation, and stated what they might be. It is recommended by the writer that a guideline is issued by the ICANZ concerning the key factors for the valuation of unlisted companies in New Zealand. This would help to raise standards and stimulate debate in the field.

Judgment and experience will always be the most important aspects in the valuation of unlisted companies. The Courts in New Zealand prefer to assess judgment by weighting the testimonies of expert witnesses according to the evidence. In this writers opinion, DCF analysis is the only suitable valuation method that will highlight all of the assumptions that have been made. Well informed expert witnesses using DCF analysis will soon educate the judiciary on its conceptual advantages. The Courts will find that DCF analysis will give them more transparent and reliable information than they currently get from traditional valuation techniques. Consequently, the areas where judgment has been used will be more visible to the Courts. The methods currently being utilised to value unlisted companies in New Zealand are antiquated and need to be modernised.

²⁷⁵ *Hatrick v CIR* [1963] NZLR 641.

Bibliography

A. Journal Articles and Texts

Abbott W.F. and Monsen R.J., (1979), On the measurement of corporate and social responsibility: self-reported disclosures as a method of measuring corporate social involvement, *Academy of Management Journal*, 22 (3), pp.501-515.

Adamson, (1986), *The Valuation of Company Shares and Businesses*, 7ed., The Law Book Company Limited, Australia.

Angelini, J.P., and Martin, S.J., (1989), Judicial Trends in Closely-Held Business Valuation, *National Public Accountant*, 34 (7), July, pp.28-32.

Anonymous, (1991), Stock Price Management: A Confluence of Interests, *The Corporate Growth Report*, 9 (1), January, pp.16.

Anson-Cartwright R.M., (1972), Valuation of Privately Owned Business Interest (Part II), ed. Reesor, L.J., in Solving the Valuation Problem, The Canadian Institute of Chartered Accountants, Canada.

Archbold, D.J.O., (1994), Business Valuations of Rest Homes and Hospitals, *New Zealand Valuer's Journal*, March, pp.15-18.

Arnold, J., and Moizer, P., (1984), A Survey of the Methods Used by UK Investment Analysts to Appraise Investments in Ordinary Shares, *Accounting and Business Research*, 14, Summer, pp.195-207.

Atva, L., (1989), Valuing Companies and Businesses is the balance sheet enough?, *Law Society Journal*, 27(1), February, pp.63-65.

Beck and Borrowdale, (1994), *Companies and Securities Law*, CCH New Zealand Limited, Auckland.

- Blair, (1990), *Valuation of Shares in Unlisted Companies*, New Zealand Society of Accountants, New Zealand .
- Bonbright, J.C., (1937), *Valuation of Property*, McGraw-Hill.
- Bosland, C.C., (1963), *Estate Tax Valuation in the Sale or Merger of Small Firms*, Simons - Boardman Publishing Corporation, New York.
- Bosland , (1964), *Valuation Theories and Decisions of the SEC* , Simmars-Boardman Publishing Corporation, USA.
- Brigham and Gapenski, (1991), *Financial Management Theory and Practice*, The Dryden Press, United States of America.
- Briscoe, J., (1991), Valuation of Private Company Shareholdings, *LawTalk*, 360, November, pp.47-48.
- Brown, S.J., (1991), Investment Decisions: Discounted Cash Flow and other Valuation Methods in Litigation, *Journal of Banking and Finance Law and Practice*, 2(1), March, pp.4-29.
- Burn, A.R., (1995), *Practical Small Business Valuations*, New Zealand Society of Accountants, New Zealand.
- Callard, L.M., and Pallot W.J., (1994), *Business Valuation Practice*, The Law Book Company Limited, Australia.
- Campbell, I.R., (1972), Valuation of Privately Owned Business Interest (Part I), ed. Reesor, L.J., in Solving the Valuation Problem, The Canadian Institute of Chartered Accountants, Canada.
- Campbell, I.R. and Taylor, J.D., (1972), Valuation of Elusive Intangibles, ed. Reesor, L.J., in Solving the Valuation Problem, The Canadian Institute of Chartered Accountants, Canada.
- Chan, K.C, and Chen, N., (1991), Structural and return characteristics of small and large firms, *Journal of Finance*, 46, pp.1467-1484.

- Chan, L.K.C, Hamao, Y., and Lakonishok, (1991), Fundamentals and stock returns in Japan, *Journal of Finance*, 46, pp.1739-1764.
- Connor, G., and Korajczk, R.A. , (1993), A Test for the Number of Factors in an Approximate Factor Model, *Journal of Finance*, 48, pp.1263-1291.
- Copeland, L.S., (1993), Efficiency of the forward market day by day and month by month, *Applied Financial Economics*, 5 (1), March, pp.79-87.
- Corrigan, M., (1995), Determining the value of a company's shares, *Australian Accountant*, March, pp.58-59.
- Crimp, G.S., (1965), *The Valuation of Unquoted Shares in New Zealand*, Sweet & Maxwell (N.Z.) Ltd, New Zealand.
- DeBondt, W.F.M, and Thaler, R.H., (1985), Does the Stock Market Overreact?, *Journal of Finance*, 40, pp.793-805.
- DeBondt, W.F.M, and Thaler, R.H., (1987), Further evidence on investor overreaction and stock market seasonality, *Journal of Finance*, 42, pp.557-581.
- Dennis, A., (1992), Determining a Fair Share, *Journal of Accountancy*, 174 (5), November , pp.81-84.
- Dunckley, J., (1993), Valuation of a Tourist Venture Based on a Wildlife Sanctuary (sic), *New Zealand Valuers' Journal*, September, pp.10-14..
- Emory, C. and Cooper, D.R., (1991), *Business Research Methods*, Richard D. Irwin, Inc., USA.
- Englebrecht, T.D., (1976), An Empirical Investigation into the Valuation of Closely Held Corporations by the Tax Court for Estate and Gift Tax Purposes, University of South Carolina, South Carolina.
- Fama, E.F., (1970), Efficient Capital Markets: A Review of Theory and Empirical Work, *Journal of Finance*, 25 (2), May, pp.383-417.
- Fama, E.F., (1991), *Efficient capital markets II*, *Journal of Finance* 46, pp.1575-1617.

- Fama, E.F., and French, K.R., (1992), The cross-section of expected stock returns, *Journal of Finance*, 47, pp.427-465.
- Firth, M., (1977), *The Valuation of Shares and the Efficient-Markets Theory*, The MacMillan Press Ltd, UK.
- Fraine, (1961), Foreword, ed. Gruenwald, A.E., in *Stock Valuation in Federal Taxation*, Michigan University, USA.
- Fraser, R.R, (1991), The Meaning of Value in Real Estate, *New Zealand Valuers' Journal*, June, pp.35-37.
- French, K.R., (1980), Stock returns and the weekend effect, *Journal of Financial Economics*, 8, pp.55-69.
- Gaynor, B., (1995), How shareholders lost out in Noel Leeming takeover bid, *The National Business Review*, March 3, pp.53.
- Glover, C.G., (1987), Valuation of unquoted shares, *Accountants Digest (replacement)*, 132, Autumn, pp.1-53.
- Gordon M.J., (1959), Dividends, Earnings and Stock Prices, *The Review of Economics and Statistics*, 41, May, pp.37-51.
- Gordon M.J., (1962), The Savings Investment and Valuation of a Corporation, *The Review of Economics and Statistics*, 44(1), February, pp.37-51.
- Gordon M.J., (1963), Management of Corporate Capital: Optimal Investment and Financing Policy, *Journal of Finance*, 18(2), May, pp.264-272.
- Grant, C.T., (1972), The Role of the Expert Valuator, ed. Reesor, L.J., in *Solving the Valuation Problem*, The Canadian Institute of Chartered Accountants, Canada.
- Gray, R., Kouhy, R., and Lavers, S., (1995), Methodological themes: Constructing a database of social and environmental reporting by UK companies, *Accounting, Auditing & Accountability Journal*, 8 (2), pp.247-260..

- Gregory and Hicks, (1995), Valuation of Shares: A Legal and Accounting Conundrum, *Journal of Business Law*, pp.56-69.
- Gruenwald, A.E., (1961), *Stock Valuation in Federal Taxation*, East Lansing: Bureau of Business and Economic Research, Michigan State University.
- Hadlee, B., (1986), Company Share Valuations, *LawTalk*, 245, August 27, pp.7-9.
- Hagen, J.C., (1987), *Valuing Shares and Businesses*, New Zealand Society of Accountants, New Zealand.
- Hancy, T.Y., and Jackson, D., (1988), Cash Flow Valuations - A Step Ahead, *Companies and Securities Bulletin*, 65 , September, pp.5.
- Harrington, D.R., (1987), *Modern Portfolio Theory, the Capital Asset Pricing Model and Arbitrage Pricing Theory: A User's Guide (2nd. ed)*, Prentice-Hall.
- Hayde, D., (1992), Valuing a business - part art, part science, *New Zealand Business Bulletin*, 9, September, pp.65.
- Hein, Piet, (1995), *Grooks*, Narayana Press, Gylling
- Hicks, D., Walton, R., and Watts, T., (1992), Matrimonial Property- Valuation issues, New Zealand Law Society, October , New Zealand.
- Hooper, K. and Greenheld, J., (1995), Open Season on Goodwill, to amortise or not?, *Chartered Accountants Journal*, October, pp.41-42.
- Hubbard, G., (1990), What's in an Expert Report?, *Australian Accountant*, 60 (8), September, pp.28-40.
- Huggins, K.M., (1973), The Valuation of Closely Held Corporations for Estate and Gift Tax Purposes, Texas Tech University, Texas.
- Jensen, H.J., (1978), Stock Valuation Formulas for Estate and Gift Taxes, *Trusts and Estates*, April, pp.238-249.

- Johnson, L.R., Shapiro, E., and O'Meara, J., (1951), Valuation of Closely-Held Stock for Federal Taxation Purposes: Approach to an Objective Method, *University of Pennsylvania Law Review*, 100, pp.166-195.
- Kantor J., (1984), The Valuation of Unlisted Shares , University of Bradford, Great Britain.
- Kantor, J., and Pike, R., (1987a), The Determinants of the Value of Unlisted Shares: Opinions of Professional Valuers in Canada, *Accounting and Business Research*, 17 (66), Spring, pp.109-115.
- Kantor, J., and Pike, R., (1987b), Valuing Unlisted Shares: A Dual Approach to the Major Information Determinants, *Managerial and Decision Economics*, 8(3), September, pp.221-227.
- Keane, S.M., (1992), *A Survey of the Valuation Practices of Professional Accounting Firms*, The Institute of Chartered Accountants of Scotland, Scotland.
- Keenan, M., (1970), Models of Equity Valuation: The Great Serm Bubble, *Journal of Finance*, 25, May, pp.243-273.
- Krippendorf, P., and Hope, C., (1992), *Content Analysis: An introduction to its methodology*, Sage, USA.
- Lathen, W.C., (1982), Valuation of Stock for Closely Held Corporations: an Empirical Test, Arizona State University, USA.
- Laughlin, R., (1995), Methodological Themes, Empirical Research in Accounting: Alternative approaches and a Case for "middle-range" Thinking, *Accounting, Auditing and Accountability Journal*, 8(1), pp.63-87.
- Lehmann, B.H., and Modest, D.M., (1988), The Empirical Foundations of the Arbitrage Pricing Theory, *Journal of Financial Economics*, 21, pp.213-254.
- LeRoy, S.F., (1989), Efficient capital markets and martingales, *Journal of Economic Literature*, 27, pp.1583-1621.

- Lintner, (1965), Security Prices, Risk and Maximal Gains from Diversification, *Journal of Finance*, 20 (4), December, pp.587-615.
- Livens, L., (1986), *Share Valuation Handbook*, Format Publishing , Great Britain.
- Lonergan, W. (1993), *Business Valuation*, New Zealand Society of Accountants, New Zealand.
- Madeo, S.A., (1979), An Empirical Analysis of Tax Court Decisions in Accumulated Earnings Cases, *The Accounting Review*, 54(3), July, pp.538-553.
- Markowitz, H., (1952), Portfolio Selection, *Journal of Finance*, 7 (1), March, pp.77-91.
- Markowitz, H., (1959), *Portfolio Selection - Efficient Diversification of Investments*, Yale University Press, New Haven, Connecticut.
- Martin, S.J., (1975), Factors used in valuation of closely-held stock, *The National Public Accountant*, May, pp.12-16.
- Maxson, M.J., (1993), Will You Get Your Moneys Worth?, *Financial Executive*, 9 (3), May/June, pp.54-58.
- McCarthy, P.L., (1994), Weighty Decisions: How best to price a closely held business, *National Public Accountant*, 39 (4), April, pp.17-19.
- McCarthy, P.L., (1994), Intensive Care for Business-Value Amnesia, *Life Association News*, 89 (5), May, pp.116-117.
- McCarthy and Healy, (1971), *Valuing a Company*, The Ronald Press Company, USA.
- McClellan, W.A., (1966), Valuation of closely held securities: accounting know-how is the key, *The Journal of Accountancy*, March, pp.47-55.
- Mei, J., (1993), A Semiautoregresion Approach to the Arbitrage Pricing Theory, *Journal of Finance*, 48, pp.599-620.
- Miller M.H. and Modigliani F., (1961), Dividend Policy, Growth, and the Valuation of Shares, *The Journal of Business*, 34(4), October, pp.411-433.

- Morgan, M.A., (1972), Valuation of a Business: a Lawyer's View, ed. Reesor, L.J., in Solving the Valuation Problem, The Canadian Institute of Chartered Accountants, Canada.
- Mossin, J., (1966), Equilibrium in a Capital Asset Market, *Econometrica*, 34 (4), October, pp.768-783.
- Owens, (1972), Introduction to the Business Valuation Field, ed. Reesor, L.J., in Solving the Valuation Problem, The Canadian Institute of Chartered Accountants, Canada.
- Pari, R., Carvell, S., and Sullivan, T., (1989), Analyst Forecasts and Price/Earnings Ratios, *Financial Analysts Journal*, 45 (2), March/April, pp.60-62.
- Pearce, (1941), Valuation of Shares, Auckland branch of New Zealand Society of Accountants, 11 November, New Zealand.
- Pearce, P.G., (1941), Valuation of Shares, *The Accountants Journal*, November, pp.104-112.
- Pike, R., Sharp, J., and Kantor, J., (1988), The Role of Accounting Information in Valuing Unlisted Shares, *Accounting and Business Research*, 18 (71), Summer, pp.249-255.
- Poon, S., and Taylor, S.J., (1991), Macroeconomic Factors and the U.K. Stock Market, *Journal of Business Finance and Accounting*, 18, pp.619-636.
- Pope, (1995), Open Season on Goodwill, an arrow in the quiver , *Chartered Accountants Journal*, October, pp.38-40.
- Pratt, S.P., (1993), Key Factors of Business Valuation, *New Zealand Valuer's Journal*, June , pp.13-16.
- Pricer, B., Vos, E., Dixon, B., (1987), The Process of Business Valuation, *Accountants' Journal*, 66, September, pp.48-52.

- Racette, L., and Wise, R.M., (1989), Business Valuation: Don't Discount Those Discounts, *CA Magazine*, 122 (3), October, pp.68-74.
- Reilly, F.K., (1989), *Investor Analysis and Portfolio Management: Third Edition*, The Dryden Press, United States of America.
- Rice, R.S., (1950), The Valuation of Close Held Stocks: A Lottery in Federal Taxation, *University of Pennsylvania Law Review*, 98, pp.367-399.
- Robinson, J., (1989), *Property Valuation and Investment Analysis*, The Law Book Co. Ltd., Sydney.
- Robinson, R., (1994), Accounting Implications of the Companies Act 1993, *Chartered Accountants Journal of New Zealand*, 73 (6), July , pp.16-19.
- Roll, R., and Ross, S.A., (1980), An Empirical Investigation into the Arbitrage Pricing Theory, *Journal of Finance*, 35(5), December, pp.1073-1103.
- Ross, R., (1976), The Arbitrage Theory of Capital Asset Pricing, *Journal of Economic Theory*, 13(2), December, pp.341-360.
- Ross, R., (1977), Return, Risk, and Arbitrage, ed. Friend, I., and Bicksler, J., in *Risk and Return in Finance*, Ballinger, Cambridge.
- Seed, H.E., (1937), *Goodwill as a business asset*, Gee & Co. Ltd, London.
- Shanken, J., (1982), The Arbitrage Pricing Theory: Is It Testable?, *Journal of Finance*, 37, December, pp.1129-1140.
- Sharpe, W.F., (1964), Capital Asset Prices: A theory of Market Equilibrium under Conditions of Risk, *Journal of Finance*, 19 (3), September, pp.425-442.
- Shelly, D.F., (1993), Setting a Fair Stock Value, *American Printer*, 211 (2), May, pp.98.
- Sherman, W.R., (1994), Valuation of Closely Held Businesses: Two Techniques, *Ohio CA Journal*, 153 (3), June, pp.37-45.

- Shiller, R.J., (1981), Do stock market prices move to much be justified by subsequent changes in dividends?, *American Economic Review*, 71, pp.421-436.
- Smith, D.M., (1988), The Valuation of Trading Stock in Financial Accounts Drawn Up Under the Companies Code: The Application of United Kingdom Common Law Revue Cases, *Company and Securities Law Journal* , 6, November, pp.228-253.
- Spencer, L., (1994), Valuing a Business, *Forbes*, 153 (8), April 11, pp.98-99.
- Sterling, R.R., (1975), Toward a Science of Accounting, *Financial Analysts Journal*, September-October, pp.28-36.
- Taylor, S.J., (1992), Rewards available to currency speculators: compensation for risk or evidence of inefficient pricing?, *Economic Record (Supplement)*, 68, pp.105-116.
- The Economist, (1995), Time for the chop?, February 25, pp.76.
- The Independent, (1995), When valuing shares never mind the P/E. Go with the cash flow, *The Independent*, 17 November, pp.17.
- The New Zealand Valuer (anon), (1964), Valuation of Unquoted Shares, *The New Zealand Valuer*, 19 (4), December, pp.139-144.
- The New Zealand Valuer (anon), (1967), The Valuation of Goodwill and Going Concerns, *The New Zealand Valuer*, 20 (4), December, pp.157-167.
- Tiller, W.J., (1990), Valuation of Petrol Service Stations, *New Zealand Valuers' Journal*, September, pp.17-18.
- Wheatley, S., (1988), Some tests of international equity integration, *Journal of Financial Economics*, 21, pp.177-212.
- Whittington, R., and Whittenburg, G., (1980), Judicial Classification of Debt Versus Equity - An Empirical Study , *The Accounting Review*, 55(3), July, pp.409-418.
- Williams, A., (1995), Skellerup chief steers \$400m bid to buy company, *The Press, Christchurch*, Wednesday, December 20, pp.25.

Wise, R.M., (1989), Business Valuation, Don't discount those discounts, *CA Magazine*, pp.68-74.

Wright, G.W., (1972), Valuation of the Publicly Owned Business Interest, ed. Reesor, L.J., in *Solving the Valuation Problem*, The Canadian Institute of Chartered Accountants, Canada.

B. Legal Cases²⁷⁶

Albany and Ors v Commonwealth of Australia (1976) 12 ALR 201

Alcan New Zealand Ltd v CIR (1993) 3 NZLR 495

Alpine Dairy Products Limited v Braddock et al., unreported, (Henery J., 28/6/94, HC, CP. 152/91)

AMP Financial Corporation (NZ) Ltd v Cegami Investments Ltd. unreported (Sinclair J., 4/3/91, HC, CP.857/89)

Angus Group Ltd v Lincoln Industries Ltd [1988] 3 PRNZ 600

Avis v BIL Equities (No 13) Ltd (No 3) (1989) 2 PRNZ 38

Bennetts v French [1990] 6 FRNZ 632

Besley v Besley, unreported (Jeffries J., 17/12/91, HC, M. 84/86)

Blackwood's Executors v Commissioner for Stamp Duties (1917) SR, NSW 453

Bray v Bray, unreported (Jeffries J., 20/06/85, HC, M.69/84)

Brigham v Brigham, unreported (Tomkins J., 23/04/86, HC, A 28/83)

Brown v Rod Cook Sportswear Ltd, unreported (Richardson J., 7/7/92, CA, CA 260/91)

²⁷⁶ This includes all the cases which were found and considered for this thesis, with the exception of those where the names are restricted at the request of the Christchurch District Court Registrar.

Buckingham v Francis [1986] 2 All ER 742

Buckley v Rice Thomas (1554) 1 Pl 113

Campbel v Dominion Breweries Ltd [1994] 3 NZLR 559

Cegami Investments Ltd v AMP Financial Corporation (NZ) Ltd [1990] 2 NZLR 308

Clark v Clark (1989) 4 NZCLC 64809

Clarkson v Bernstone & Armstrong, unreported (Anderson J., 12/07/90, HC, 18/88)

Coleman v Myers [1977] 2 NZLR 225

Commissioner of Stamp Duties v Haynes [1924] NZLR 337

Cottrell v Pawcatuck Co (1956) A.2d 225, 229 and 232

Cox v Ball, unreported (Holland J., 7/3/94, HC, CP 11/93)

Cox v Cox, unreported (Gallen J., 18/12/87, HC, M.76/85)

Crichton v Crichton [1991] NZFLR 529

Dean v Dean, unreported (Casey J., 28/08/85, HC, M15/05/04)

Domglas Inc v Jarislowsky Fraiser & Co Ltd 138 DLR 3D

Flett v Flett [1983] 1 FRNZ 587

Flett v Flett (1985) 3 NZFLR 487

Freeman v Freeman [1989] 5 FRNZ 531

Galantai v Galantai (No 2) (1981) 4 MPC 1972

Gamble v Gamble, unreported (Holland J., 17/06/85, HC, M.218/84)

Giles v Giles [1985] 1 NZLR 761

Gold Coast Selection Trust Ltd v Humphrey [1948] AC 459

Gordon et al., unreported (Temm J, 14/02/92, HC, CP 452/90)

Gough v Gough, unreported (Heron J, 14/11/85, HC, M.278/84)

Gouk v Gouk [1987] 3 FRNZ 76

Grange v Grange (1991) 5 NZCLC 67,138

Gulfland Motor & Marine Ltd v Coast Motor Cycles Ltd et al., unreported (Wylie J., 29/11/88, HC, CP 2538/88)

Hackett v Solley, unreported (Gallen J., 23/10/87, HC, CP 124/86)

Harlick v Harlick, unreported (Wallace J., 20/10/83, HC, M.533/02)

Hartley v Hartley [1989] 2 NZLR 240

Hartley v Hartley [1991] 1 NZLR 46

Hatrick v CIR [1963] NZLR 641, and Blair (1990)

Hayes v Johnston [1988] 4 FRNZ 325

Heaslip v Scott, unreported (Robertson J., 27/3/92, HC, M55/90)

Hieber & Ors v Hieber (1989) 1 NZ ConvC

Hilson v Hilson, unreported (Doogue, J., 8/8/90, HC, AP 30/90)

Holt v Holt (1985) 3 NZCLC 100,096

Holt v Holt (1987) 1 NZLR 85

Holt v Holt (1990) 3 NZLR 401

Holt v Inland Revenue Commissioner (1953) 2 ALLER 1499

In Re Louisson deceased (1924) GLR 275

In Re Monro (Deceased): Turnbull Anor v The Commissioner of Stamp Duties [1944] CLR 58

Jackson v The Public Trustee, unreported (Rabone J., 1/11/91, HC, Cp 850/89)

Jagwar et al., unreported (Barker J., 29/6/90, HC, CL85/87)

Jamieson v Cox [1990] NZFLR 165

Johnston v Johnston (1984) 3 NZFLR 65

Keesing Anor v The Commissioner of Stamp Duties [1935] GLR 58

Kiripaka Partners and Ors v Burr and Morgenstern, unreported (Casey J. , 9/11/93, CA 205/92)

Lapwood v McGregor [1983] 1 BCR 460

Leathem v Leathem, unreported (Sinclair J., 16/05/84, M.498/81)

Leucadia National Corporation v Wilson Neill Ltd [1994] 7 PRNZ 701

Lusk v Archive Security Limited & Anor (1991) 5 NZCLC 66,979

Masport Limited v Morrison Industries Limited, unreported (Cooke P., 31/08/93, CA, 362/92)

Masport Ltd v Morrison Industries Ltd, unreported (Nicolls, Kinkel, Oliver, Lords, 14/11/94, PC)

Matthews v Matthews [1987] 3 FRNZ 627

McKenzie and Cosmetic Corner (1981) Ltd, unreported (Williamson J., 24/08/92, HC, AP 9/92)

McNulty v The Ministry of Survey and Land Information (1993) New Zealand Valuers Journal, December, pp.30-48

Mirage Entertainment Corporation Limited (in rec) v Arthur Young (1992) 6 NZCLC 68,213

Money v Ven-lu-ree et al., unreported (Henry J., 11/08/87, HC, CL 23/87)

Multiply v Old Mill Farms & Ors (1995) 7 NZCLC 260,746

N M Avis v BIL Equities (No 13) Ltd (No 3) (No 4) [1989] 2 PRNZ

Neilson v Neilson, unreported (Moller J., 27/11/84, HC, M 1428/83)

Neonex International Ltd v Kolasa (1978) 84 DLR (3d) 446

New Zealand Insurance Co Ltd v CIR [1956] NZLR 501

New Zealand Motor Bodies v Emslie [1985] 2 NZLR 569

NZI Bank Limited v Jensen Davies & Co. Limited, unreported (Wylie J., 2/07/91, HC, CL. 41/91)

Oppenheimer New Zealand Ltd v Struthers [1994] MCLR 156

Page v Page (1981) 5 MPC 114

Pettit v Pahl, unreported (McGechan J., 28/6/94, HC, AP 179/93)

Pickens v Templeton (1994) 2 NZLR 718

Portfolio Management Limited et al, unreported (McGechan J., 27/3/90, HC, CP 192/90)

Pountney v Pountney [1990] 7 FRNZ 156

Pountney v Pountney unreported (Hardie Boys J., 20/09/91, CA, CA 45/91)

Pountney et al. v Pountney et al., unreported (Robertson J., 24/05/93, HC, CP 1641/87)

Powell v Powell [1987] 1 NZLR 192

R Hannah & Co Ltd v Walker (1994) 16 NZTC

Re Cyprus Anvil Corp v Dickson (1987) 33 DLR (4th) 641

Re National Dairy Association of New Zealand Ltd [1990] 2 NZLR 607

Redmond v Redmond, unreported (Holland J., 13/10/92, HC, AP 115/92)

- Robertson v Robertson* [1990] 7 FRNZ 69
- Rod Cook Sportswear Ltd v Brown*, unreported (Robertson J., 29/5/91, HC, CP 211/87)
- Salmon v Salmon & Co Ltd* [1897] AC 22
- Scnders v Sanders*, unreported (Fraser J., 15/02/90, HC, M.203/87)
- Sauer v Cameron* (1993) NZFLR 569
- Sauer v Cameron*, unreported (McGechan J., 26/5/93, HC, AP 265/92)
- Schierning v Schierning (No 3) & (No 4)* 2 FRNZ 512 & 516
- Seiringer v Seiringer* (1980) 4 MPC 185
- Sibbald v BP Oil New Zealand Ltd*, unreported (McGechan J., 10/4/91, HC, CP 108/90)
- Slater and Chatfield v Riley*, unreported (Richardson J., 19/06/92, CA, CA 296/91)
- Spencer v The Commonwealth* (1907) 5 CLR 418
- Sutherland Steel Products Limited v Sutherland Steel (1986) Limited*, unreported
(Hardie Boys J., 16/12/87, HC, CP.) 438/87
- Telfer v Telfer*, unreported (Robertson J., 21/10/94, HC, HC 49/94)
- Thacker v Thacker*, unreported (Jeferies J., 18/06/85, HC, M.592/83)
- Thomas v H W Thomas Ltd* [1984] 1 NZLR 686
- Tremaine v Commissioner of Stamp Duties* [1942] GLR 121
- Vujnovich v Vujnovich* [1988] 2 NZLR 129
- Wagner v Davies*, unreported (Sinclair J., 26/05/87, HC, A 1513/84)
- Waldron v Waldron* (1990) 6 FRNZ 69
- Weinberger v UOP Inc* (1983) 457 A.2d 701 (Del Sup Ct)

Wheelans & Anor v Hayes & Anor [1986] NZCLC 99789

Wilkinson v Diprose (1987) 6 FRNZ 37

Wilkinson v Wilkinson [1991] 8 FRNZ 1

Wilson v Wilson, unreported (Tompkins J., 7/08/84, HC, M 1568/83)

Wong v CIR, unreported (Cook, J., 15/06/82, HC, M.713/79)

Wood v Wood [1985] 1 FRNZ 576

Yeowell v Hitchcock et al., unreported (Towle Master, HC, CP 386/90)

Appendix — Efficient Market Hypothesis

It can be very difficult to abandon cherished ideas about rational behaviour and market efficiency. Although the efficient market hypothesis is a good first approximation to the behaviour of market prices, a considerable quantity of empirical research in the 1980s has shown the hypothesis is suspect.

Taylor (1992, p.115)

The efficient market hypothesis (EMH) was first brought together by Fama in 1970. This classic article built upon early work on the random walk hypothesis.²⁷⁷ The EMH holds that share prices will fully reflect all available information. Fama (1970) split the EMH into three testable components:

- I. *Weak-form EMH*: This holds that share prices will fully reflect all stock market information, which includes historical sequences in prices, trading volume and any other market information, for example, odd lot transactions.
- II. *Semistrong EMH*: This assumes that share prices adjust rapidly to the release of new information. Semistrong EMH incorporates weak-form EMH because stock market information is publicly available. New information includes stock splits, economic news, political news, etc.
- III. *Strong-form EMH*: This asserts that share prices fully reflect all information, both public and private. No investor should be able to consistently derive above average profits. Strong-form EMH is dependent upon semistrong and weak-form EMH holding, and adds to this the assumption of perfect markets, in which all information is available to everyone at the same time.

Early research found support for the EMH, with the theory lending weight to the use of the Capital Asset Pricing Model, and the Arbitrage Pricing Theory. However, in recent years the theory has come under increasing pressure from advanced empirical tests. Fama (1991), in a follow up to his original paper, reclassified the components of EMH to reflect modern research:

²⁷⁷ The random walk hypothesis holds that prices move in a random walk, whereby it will be impossible to tell in which direction, and to what extent, prices will move a moment later.

- I. Tests for return predictability: This line of research has focused not only on predicting returns from past returns (testing weak-form EMH), but also now includes the forecasting power of dividend yields (D/P), earnings price ratios (E/P) and term-structure variables.
- II. Event studies: These studies investigate the speed and influence of new released information on the price of shares.
- III. Tests for private information: This research considers the potential profits for those with private information, for example, it examines insider trading, security analysts and portfolio managers.

Fama (1991) defends his model (EMH) vigorously in the face of wide-spread attack. His bias towards EMH is unabashed: (Fama, 1991, p.1602, emphasis added):

To be fair, and to illustrate that efficiency issues are never entirely resolved, I play the devil's advocate. (Attacks on efficiency belong, of course, in the camp of the devil.).

Nevertheless, two distinct schools in finance have developed, with the case against EMH (for all three of Fama's (1991) components) growing proportionately with increasing research in the field.²⁷⁸ For example, Taylor (1992, p.115) found evidence that market efficiency does not hold in its weakest form for currency markets, and made the following concluding remarks:

It can be very difficult to abandon cherished ideas about rational behaviour and market efficiency. Although the efficient market hypothesis is a good first approximation to the behaviour of market prices, a considerable quantity of empirical research in the 1980s has shown the hypothesis is suspect.

Given that considerable debate exists as to the efficiency of large, heavily traded, international share and currency markets, it is extremely unlikely that the small, infrequently traded, market for unlisted companies in New Zealand is in any way efficient.

²⁷⁸ A brief selection of this research includes: French (1980), DeBondt and Thaler (1985, 1987), LeRoy (1989), Taylor (1992) and Copeland (1993).