

UNLISTED COMPANIES: A VALUATION INVESTIGATION

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SUMMARY

Valuation of shares in a company influences many management decisions. The latest example is current legislation which makes it difficult if not impossible for a company to obtain contracts from local and provincial governments, financial institutions and other service providers, without the proper Black Economic Empowerment share-composition of the company. This is just one example of the issues which force companies, especially in the unlisted sector, to establish the value of their shares.

The primary objective of this report was to critically investigate valuation procedures for unlisted companies in South Africa. A further objective was to theoretically and empirically investigate existing valuation models and which of these models were currently used by valuers.

It was found during the investigation that the unlisted sector was more complex to value than the listed sector because of the difference in overall regulation between the two sectors. All the models researched in the literature were evaluated and those suitable for this sector were selected for in-depth research.

The population identified was anyone who is in the business of the valuation of unlisted companies in South Africa. The sample, as a properly representative subset of the population, was identified as 97 valuers. The valuers were auditors, business brokers, attorneys, bankers and accountants. The results of the surveys are reliable, because it was ensured that a proper cross-section of respondents was obtained.

A questionnaire comprising of 11 categories was structured and questions grouped to address valuation procedures (Appendix 1). A follow-up questionnaire that focused on different valuation models, including sub- approaches used in the unlisted sector was also constructed (Appendix 2). Because of the perceived complexity of valuations, telephone interviews ascertained that the questions were answered without any ambiguity.

Seventy seven percent of the 97 questionnaires were completed. The most insightful information gained was that only 6,7% of the respondents indicated that a standard valuation model/procedure was being used.

The survey on the valuation models delivered interesting results. It was found that there is a trend to use the Discounted Cash Flow method (DCF). The Earnings Multiple Method and Price Earnings were still being used amongst the respondents.

The results of the studies were documented and factors came up which could be used to design a proper valuation procedure in the unlisted sector.

FREQUENTLY USED SYMBOLS

β	Beta
c	cost of capital
CAPM	Capital Asset Pricing Model
DCF	Discounted cash flow
EBIT	Earnings before interest and taxes
EBITDA	Earnings before interest, taxes, depreciation and amortisation
ESOP	Employee stock ownership plan
E	Equity
FCF	Free cash flow
I	Capital invested for growth year of the investment cycle
k	Discount rate, rate of return, cost of capital or required return
k_d	Before-tax cost of debt
k_e	Cost of newly issued common stock
k_{RF}	Risk-free rate of return
k_{ps}	Cost of preferred stock
k_s	Cost of retained earnings, cost of common stock
M_{RP}	Market risk premium
N	Calculator key denoting number of periods
n	Life of a project (periods or years)
NOPAT	Net operating profits after taxes
P	Price
P/E	Price/earnings ratio
r	After-tax rate of return
Σ	Summation sign
T	Tax rate
t	time
tD	Tax benefit of debt
V	value
WACC	Weighted average cost of capital
W_{ce}	Weight of common equity
W_d	W_d Weight of debt
W_{ps}	Weight of preferred stock

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Chapter 1

Introduction

1.1 BACKGROUND

Through the ages and more so today, the focus of business is to generate profits and create wealth for those participating in the business process. Currently, there is a huge awareness of and drive in the business community to manage businesses with the purpose of creating value for the owners of the enterprise, other stakeholders, and the community. It is, therefore, more important than ever before for business people to develop strategic plans that will create opportunities for sustainable growth and value creation. In this sense, being aware of the current value of the enterprise and being able to determine the expected future values at certain points in time, it places businesses in a unique position to measure the progress of strategic plans. Knowing what the value targets are at certain points in time, can thus serve as benchmarks or milestones to measure the success of the strategic plan to create value. From the above, it is clear that the value of a company or the valuation process influences many management decisions.

In a strategic financial context, it may be necessary to determine the value of a business for purposes of raising capital, dealing with buying and selling of businesses and even to deal with unexpected offers from prospective buyers. Knowing the value of one's business and understanding the valuation process, as well as knowing the value drivers, are also important when acquisitions, joint ventures, strategic investments or new business opportunities are considered.

The valuation of an owner's interest in a business, as indicated by Joubert and Viljoen (1995:1), whether in a partnership, close corporation or a limited company, or even a sole proprietorship, requires considerable insight and makes high demands on the valuator. It is certainly one of those areas that present severe problems, as it requires much more than mere number crunching.

According to Bennet (1999:250) valuation is the essence of planning. Decision-making can easily deteriorate into endless subjective debates. It needs some method of simulating how alternative business strategies and financial structures are likely to affect a company's market value. Judgement, seasoned by experience, must play a role, but judgement shaped by a projection of the likely costs and benefits, risks and rewards. The latter is likely to lead to the selection of business strategies and financial structures that will be more highly regarded by the market than those chosen upon instinct alone or those that place the attainment of seemingly laudable business goals above all else.

1.2 A TOPIC THAT IS WORTH INVESTIGATING

Valuation models for use in the share market environment are relatively well documented and participants can benefit from a good understanding of valuation methods. It is however remarkably difficult to find an informed and comprehensive analysis of valuation models for unlisted companies. For the purpose of this report, unlisted companies include sole proprietors, close corporations and other business entities not listed on the Securities Exchange.

1.3 REQUIRING VALUATIONS

Joubert and Viljoen (1995:2) indicate that valuations are often required in cases of arbitration in terms of the provisions of Section 5 of the Estate Duty Act (Act 45 of 1955 as amended), or for tax purposes. In these cases, it is required of valuers to give opinions on the fair value of shares or businesses. Clearly, it is essential to be completely unbiased and to concentrate on the relevant facts only for these types of valuations.

Clients request valuations for specific purposes, for example, on behalf of a client that is negotiating the purchase or sale of shares in a company, or an interest in a business. In such circumstances, the valuator may receive special instructions concerning the basis of the valuations or the assumptions on which the assessment is based on.

In other cases, special or specific methods of valuation may be prescribed, for example, in the articles of the company concerned, or where businesses are merged on a basis of expected profits. Valuers will normally accept restrictions and instructions, but they will usually indicate clearly:

- Who the valuation is done for and who should have access to information contained in the report;
- Which restrictions apply; and
- On what assumptions the valuation is based on.

1.4 PROBLEM STATEMENT

Many valuation models can do an “accurate” assessment for listed companies. Some of the models require adjustment for the small and medium business sector.

However, the problem arises in raising capital for whatever reason, or an investor wants to purchase equity in an unlisted company. The company cannot establish the intrinsic value with certainty, which may result in unacceptable levels of risk for the financier or investor.

The same problem exists when an investor wants to purchase equity in an unlisted company.

1.5 STUDY OBJECTIVES

1.5.1 Primary Objective

The primary objective is to investigate valuation procedures critically for unlisted companies in South Africa.

1.5.2 Secondary objectives

The secondary objective is to investigate - theoretically and empirically - existing valuation models and procedures. In addition, the author will investigate which models the relevant valuers use.

1.6 RESEARCH METHODOLOGY

The research procedure approached was to, firstly, consult current overseas and local financial, managerial and business journals containing articles on any aspect of company valuations, and secondly, to locate books and unpublished reports under the heading '*valuations*' and '*unlisted companies*'.

The research is based on both a literature study and empirical research. For the empirical research section, a sample will be drawn on bankers, accountants, financiers of businesses and buyers and sellers of businesses in the unlisted sector. The qualifying factor is people and entities involved in valuation assessment.

Questionnaires were distributed to the identified sample relating to valuation procedure and practices for the valuation of the unlisted business sector.

The intention is to use the information gained in the process, to test a practical valuation model.

1.7 RELEVANCE OF THIS REPORT

This report will potentially appeal to a number of parties associated with acquisitions, financing, investing, buying and selling, and obtaining of equity in the unlisted business sector.

1.7.1 Academics

The findings of this survey should indicate whether current literature is sufficiently relevant to the unlisted business sector, and whether further research should be pursued. Listed company research has the advantage that valuations are comparatively available. The financial media constantly focuses on this sector. Private companies and other closely held business forms on the other hand, have far fewer criteria by which to monitor market value. Keats and Bracker (1988:42) indicated that managers of such companies, by exercising substantial influence over domains of operational goals, influence the valuation criteria. To overcome the lack of public information, Sapienza et al (1988:45) conducted a study amongst smaller private companies to evaluate organisational performance using subjective measures. The conclusion from the latter study is that, in the absence of objective measures, researchers must develop reliable alternative measures that correspond to accounting measures such as return on assets, sales growth, and other relevant criteria. In the event of such measures becoming feasible alternatives, future research could focus on the incorporation of these measures to evaluate performance of the relevant companies.

1.7.2 Buyers and sellers

Buyers in the smaller business sector generally lack business expertise for strategic decision-making. The literature survey and valuation procedure of the report should serve as a starting point from which to approach the development of the valuation model. The report could also be of value to large companies looking to acquire closely held and/or smaller unlisted companies.

1.7.3 Third parties

Financial institutions, business consultants, business valuers, business brokers, attorneys and auditors may all be involved in structuring a purchase agreement or for a

variety of other purposes. This report should provide greater insight into actual valuation practices in the market.

1.8 LIMITATIONS OF THIS REPORT

The following limitations had an influence on this report:

1.8.1 Nature of the field of study

Owners of unlisted entities are very secretive about their organisations. The absence of compulsion to report financial and other information publicly creates a quantitative information gap, particularly concerning objective post-performance evaluation. The report has sought to overcome it by attaining qualitative information, which provides, at least, an insight into actual business valuation practices and perceptions.

The information available on unlisted companies for valuation tends to be much more limited, in terms of both history and depth, since often, unlisted companies are not governed by the strict accounting and reporting standards of listed companies.

In addition, the standard techniques for estimating risk parameters (such as beta and standard deviation) require market prices for equity, an input that is lacking for unlisted companies.

When valuing unlisted companies the motive for the valuation often matters and can affect the value. In particular, the value of a privately held company may differ in circumstances where it is being valued for sale to an individual, for sale to a publicly traded company or for an initial public offering. In particular, whether there should be a discount on value for illiquidity and non-diversifiable risk or a premium for control will depend upon the motive for the valuation.

1.8.2 Are unlisted companies unique?

There are a number of common characteristics shared by unlisted companies with publicly traded companies, but four significant differences affect how one estimates inputs for valuation.

These differences are:

- Publicly traded companies govern by a set of accounting standards that allow identification as to clearly define what each item in a financial statement includes. The latter allows comparison of earnings across companies. Unlisted companies have less rigid standards and there can be wide differences between companies on how items are accounted for.
- There is far less information about unlisted companies available, both in terms of the number of years of data that is typically available and, more importantly, the amount of information available for each year. For example, publicly traded companies have to break down operations by business segments in their filings, and provide information on revenues and earnings by segment. Unlisted companies do not have to, and usually do not, provide this information.
- A constantly updated price for equity and historical data on this price is a very useful piece of information, obtained easily for publicly traded companies; however, it is not the case with unlisted companies. In addition, the absence of a ready market for private company equity also means that liquidating an equity position in a private business can be far more difficult (and expensive) than liquidating a position in a publicly traded company.
- In publicly traded companies, the stockholders tend to hire managers to manage the company on their behalf, and most stockholders hold equity in several companies in investment portfolios. The owner of a private company tends to be intimately involved with management, and often has all wealth invested in the company. The absence of separation between the owner and management can result in an intermingling of personal expenses with business

expenses, and a failure to differentiate between management salary and dividends (or equivalent).

Each of the differences cited above have the potential to have an impact on the value by affecting discount rates, cash flows and expected growth rates.

1.9 OUTLINE OF THIS REPORT

This report consists of four chapters, which are summarised as follows:

Chapter 1: Introduction

This chapter introduces current awareness in the business community to create value and the necessity to measure the value of enterprises in the unlisted sector. It also states the study objectives.

Chapter 2: Overview of valuation concepts and methods

This chapter evaluates current valuation literature and practices. By drawing on a wide range of sources, it reveals to the reader the concepts, procedures, advantages and disadvantages of valuation methods. The focus is on the integration of theory and practice.

Chapter 3: Research methodology and process methods

This chapter identifies the population from which the sample was drawn, how the survey was conducted and how the results are to be processed and presented.

Chapter 4: Summary, discussion and conclusion

The report ends with an overall review of the study, its strengths and limitations, and posits recommendations on areas for further study and research.

Chapter 2

Overview of valuation concepts and models

2.1 OBJECTIVES OF THIS CHAPTER

An investigation into the availability of literature on the valuation of listed companies revealed an extensive range of books, articles, and research studies addressing various aspects of this broad topic. The objectives of such a review on valuation literature, the subject matter of this chapter, is to:

- Obtain insight into the valuation procedure and the extent to which the literature agrees on the various aspects.
- Compare and evaluate the research findings of some of the studies on valuation practice; and to
- Obtain articles and research results specific to valuations in the unlisted business sector.

The quest of these objectives then answers questions such as:

- Are valuations viable and reliable?
- When should valuations be pursued?
- How should valuations be approached?
- Do valuations of smaller unlisted companies need a different approach?

2.2 SCOPE OF LITERATURE

An analysis of some of the articles and books written on valuation revealed the wide nature of this topic. Valuation, Cost of Capital and Corporate Valuation were concepts easily found regarding listed companies. Information matter addressing valuation in the unlisted sector was very scarce.

No articles that dealt with valuation of unlisted companies specifically could be located. For this reason, the search widened to include articles on business analysis, cost of capital, corporate finance, and related topics. This information was interpreted as to its likely effect on the valuation process.

2.3 PRE-VALUATION ANALYSIS

The purpose of any venture is to increase the long-term wealth of shareholders. If one of the reasons for valuing a venture is for acquisition purposes, value creation is imperative; otherwise, it has not been worth the effort. Clarke (1988:12) is of the opinion that the main reason for pessimism of company growth through acquisition is the evidence of nil or negative changes in the value of shareholders' holdings in acquiring companies. Porter (1998:350) believes the price of an acquisition is set in the market, which is relatively efficient, thus eliminating any above-average profits from making that acquisition. Porter (1998:352) posits that acquisition will only be profitable if:

1. "The floor price created by a seller's alternative of keeping the business is low;
2. The market for companies is imperfect and does not eliminate above-average returns through the bidding process;
3. The buyer has unique ability to operate the acquired business".

Joubert and Viljoen (1995:2) stated that valuations are no more than informed opinions and independently of each other, two valuers supplied with the same information will often have differing opinions on value. Nevertheless, if a person is acquainted with the relevant facts, applies the correct principles of valuation, and gives a subsequent opinion unambiguously, an acceptable valuation is at hand. Mullen (2003:1) states that it is not the first time that valuers have to operate within a volatile market in South Africa. The volatility entails that the current market has within it uncertainties about the length and breadth of recession; global market impacts; a dent of confidence in the rigour of the audited figures and a lack of trust in analysts' reports. One of the major impacts is

the result of the hype and then downfall of technology business shares. This has caused a move from *pricing to valuation basics*.

Furthermore, value is often the price that someone is prepared to pay. In view of this, price equals value. Mullen has noted in the mentioned article that this is often the case in a bull market; and less often in a bear market. The motivation for the aforementioned statement is that investors' attitudes determine the market. A bull market refers to a market on the rise typifying a sustained increase in market share prices. In a bull market period, investors have faith that the uptrend will continue in the long term.

Mullen (2003:1) further indicates that the valuator should go back to basics instead of valuing by reference to the "last price quoted". "Last price quoted" was the method used during the dot-com/technology stock boom. Steady increasing valuation inflation was the result. The latter made valuation methods look as if it were invented through sucking thumb to justify comparability with the last price.

Finally, unlisted company valuation relies, to some extent, on some measure of comparability with the listed sector. According to Mullen (2003:1), the latter is influenced by sentiment and over-reaction to the listed sector. To determine fair value, as opposed to what price one can currently get, the valuator should apply the basics of valuation; not only the mathematical basics, but also, and as important, fundamental analysis basics. Valuation is 95% focused on the analysis of the rights, privileges, benefits and restrictions that go with the shareholding under consideration as well as the company and the environment in which it operates. There should be a clear understanding of how the company makes its money as well as the nature of the business. Mullen also stated that the cash flows should be studied and reconciled with the profits. Finally, cash flows and profits should be related to company value.

2.4 ESTABLISHMENT OF VALUATION CRITERIA

Experts agree that valuation criteria are crucial and will ensure that resources are not wasted on valuations that do not meet the buyers' and seller's objectives (Salter and

Weinhold, 1984:146; Aaker, 1994:315; Rappaport, 1979:100; Newton, 1981:51; Joubert et al., 1995:3). Valuations, in turn, are a basis on which the company's strengths and weaknesses are analysed. Joubert and Viljoen (1995:3) suggest that the business interests that valuers assess, in reality consist of certain rights from which the owner can gain future financial benefits. Sentimental values are not the concern of the person doing the valuation. Future financial benefits should be the sole basis of valuations. Such financial benefits may arise from:

- Distribution of earnings to the owner in the form of dividends;
- Interest accruing to the owner;
- Possible other income arising from the rights; and
- Sale or liquidation proceeds, should the business or property of which the rights are held, are to be sold or liquidated.

If the percentage interest in the company is relatively high, the owner can often exercise shareholder rights actively by taking part in management. If the interest is relatively low, the owner may be restricted to a passive acceptance of whatever profit is generated under the management of others. Whatever the circumstances, the valuator's basic task is to calculate the capitalised value – at valuation date – of the future sums the owner can fairly expect to receive.

Joubert and Viljoen (1995:3) further suggest that valuations assume that the market in securities is well developed. Prices and valuations based on security market activity are thus a pool of formed opinions. Thus, in obtaining a rate of return on a particular share or security from the stock exchange or securities market, one assumes that such a figure is sufficiently reliable for use as the basis of the valuation.

This does not mean that such a return ought to be used without any adjustment for known differences between the security to be valued and the one for which the return was obtained. Such adjustments are an integral part of the valuation process. However, it means that one needs to ask why blue chip listed shares used as benchmarks, trade at relative low returns, compared to other less desirable shares. One may assume that

the market knows enough about the benchmark shares and the good prospects of the companies involved to warrant such low returns – or such high prices for the shares concerned.

Furthermore, when the net expected financial benefits depend on the net income earned by a company – as is in fact the case with most shares – it is not only necessary to estimate the amount of the sustainable net income, but the quality of such earnings should also be gauged. The higher the quality of earnings, the more likely it is that a company will be in a position to distribute earnings as dividends to shareholders.

Quality of earnings refer to the amount of earnings attributable to higher sales or lower costs rather than artificial profits created by accounting anomalies such as inflation of inventory. Quality of earnings can in general, be considered poor during times of high inflation. In addition, conservatively calculated earnings are considered to have higher quality than those calculated by aggressive accounting policies.

Benninga and Sarig (1997:79) propose that each of the potential users of financial information may be interested in different nuances of information, which means that the mode of analysis that is suitable for one user of information may not be suitable for another. Valuation techniques and valuation-related topics that are useful in many settings were covered. The ability to tailor generic tools to a specific need is a skill one should develop with experience.

Benninga and Sarig (1997:79) further reiterate that a valuation process involves both the collection and the evaluation of information in order to derive values for corporate securities.

The ultimate goal of information gathering and model building is the translation of our expectations about the company and its environment into projected financial performance for the company and the translation of the projected financial performance into values – of the company as a whole and of the securities - it has issued.

Palepu et al (2000:3-14) also draws the attention to the fact that the purpose of accounting analysis is an important step in the process of analyzing financial reports. The purpose of accounting analysis is to evaluate the degree to which a company's accounting captures the underlying business reality. Sound accounting analyses improve the reliability of conclusions from financial analyses, an important step in the valuation process. The valuator should identify any red flags (potential problem areas) needing further investigation. Another important step is to adjust accounting numbers to remove any noise and bias introduced by accounting rules and management decisions.

Barker (2001:1) stated that a good understanding of valuation methods requires two things, namely to firstly provide an analytical review of valuation models, identifying the relationships between the different models and exposing the assumptions that each derive at. Secondly, to provide an evaluation of the data that is available for use in valuation models. Variation in the type and quality of data is the key determinant of the usefulness of any given valuation model. There is therefore an important relationship between the choice of valuation model and the available data.

The abovementioned statement correlates with the research done on the topic of valuations of unlisted companies.

Considering other valuation criteria, according to Joubert and Viljoen (1995:4), are the discounted cash flow approach. The extent to which the expected net income is distributable should be accounted for in the discount rate. If the quality is particularly good, as it often is in price-controlled industries, a substantial discount will be applied to the rate obtained in the market, and vice versa.

At this stage one should consider "going concerns" in respect of this study.

Joubert and Viljoen (1995:4) divide going concerns, meaning those businesses where there is no intention of liquidating the business itself or a material portion of its operation, into the following types:

- The business that has an average performance and the net income percentage of which is comparable to the percentage of net income on capital is considered fair by the valuator. An important consideration in the valuation of going concerns is the amount of money paid for goodwill. Normally, goodwill is linked to the ability of the firm to perform better than the average business in its industry. Businesses performing on average will therefore be valued on the current value of its net assets without allowing any value adjustments for goodwill.
- If a business performs better than average, the valuation will be adjusted to include an amount for goodwill, for example the difference between the valuation as a going concern and the net asset value.
- The new business, which has the physical means to yield a net income, but does not yet have a proven profit record, or is showing temporary losses. Such a business should not be valued at more than its net asset value, or as a going concern, from which to deduct a provision for negative goodwill. Another possibility is to base the valuation on the probable sustainable net income, and to use a higher discount rate that reflects the additional risk involved.
- The business that has a chronic weak performance and a less-than-fair yield can be valued by applying the fair rate to the real earnings. This means that negative goodwill is attributed to the business. Such a business will probably go into liquidation when material sections of its assets are to be replaced. This replacement in itself will not result in substantially improved profitability.

2.5 VALUATION CONCEPTS

Apart from helping management to select strategy and structure, a valuation framework can place a value on the entire consolidated company and its individual business units. It can also serve to identify acquisition and divestiture candidates.

For the consolidated company, a corporate valuation can indicate whether a company is trading for fair value. If it does not trade at a fair value, it might be required to improve communication with its investors and the investment community. Communication can focus on whether it is advisable to raise or retire equity at current prices, and whether to consider an overall restructuring (Bennet, 1999:251).

ESOP's (Employee stock ownership plan) are becoming increasingly popular. A periodic valuation is essential to determine the value of shares for an ESOP for private companies and possibly because of cashing out management incentives.

An outside appraisal can also help management to get a sense of its progress in creating value as a reality check on the success or failure of current strategies and structures. Without a public quote to provide informative feedback, a private company may need, in some respect, a technique to simulate value.

Bennet (1999:251) suggests that valuing individual business units, within a valuation framework, can give an indication of which business units are, and which are not, creating value. The latter may be candidates for sale and/or restructuring. In one recent engagement, for example, it was discovered that the performance of 30% of the company's businesses was responsible for the creation of the total market value of the company. The remaining businesses in the company destroyed half of the market value created by the abovementioned 30%. Money was pumped into the non-performing businesses even when it never earned a return to cover cost of capital. Substantial value was being lost in that way. This, admittedly, is an extreme case, but it is found that the phenomenon is present in almost all companies to a greater or lesser extent.

Employing valuation isolates pockets of competitive advantage or comparative weaknesses within what appear to be integrated business units. The focus should be to sharpen the allocation of resources, to either capitalise on strengths, or rectify or dispose of weaknesses. A valuation framework can give direction to employees with

regard to what is required to accomplish a specified increase in the value of the business unit and/or company. It is often said that by giving key managers an education in the fundamentals of valuation expedites decision-making and facilitates communication throughout the company.

Valuation can be used in reverse too. Share prices convey the distilled wisdom of astute investors concerning a company's prospective income and accompanying risks. Thus, a valuation framework can be used to develop a set of projections, which equate to a company's actual market value. These projections can in turn set breakeven goals – performance, which, if met at a minimum, guarantees that investors will receive the expected return on investment. Pricing acquisitions, as an example, in the same way, is possible, particularly when the asking price is known.

M&M – Miller & Modigliani – presented the original “economic” models of corporate valuation in 1961. In the revolutionary paper, *“Dividend Policy, Growth, and the Valuation of Shares,”* M&M derived intrinsic valuation formulas by ingeniously applying long-standing microeconomic principles of price formation and market arbitrage. M&M liberated valuation from the tyranny of the accounting model, from multiples and earnings per share, and from the view that the level of a company's dividend payments somehow fundamentally determined its value. According to Bennet (1999:253), M&M's propositions are considered by almost all serious academic researchers to be the definitive statements on corporate valuation. M&M developed three distinct valuation procedures and showed how each would yield an identical value for a given set of projections. At this time, only one of the three methods – discounted cash flow – is widely understood and practiced. The other two remain little known despite having didactic and practical advantages.

Bennett (1999:253) explained that all of M&M's procedures predict a company's total market value V , the market value of its entire debt D , and Equity E capitalisation.

$V=D+E$: For an individual business unit or a private company, total value is probably what matters, but for traded companies share prices may be of greater interest. To obtain a share price (P) for an unlisted company, the market value of current debt (liabilities), and other claims senior to the common stockholders, is subtracted from total value, and then the resulting common equity value is divided by the number of common shares outstanding N : $E=V-D$

$$P=E/N$$

This approach follows the reasoning of leading investors like Warren Buffet of Berkshire Hathaway. When valuing a company at earnings per share, cash flow per share, or anything per share, it was not taken into consideration. Instead, they recognize that common shares are best understood as shares in the value of a business enterprise. Buffet acquires stakes in companies that sell at a discount from what is believed to be the true per share value of the underlying operations. The fundamental question, in other words, is not how to value common shares, but how to value businesses.

Bennet (1999:299) reiterates that the value driver model presents six essential factors that collectively account for intrinsic value of any company, business unit or acquisition candidate. Four of the factors are under management's control through policies and performance. Two are market-determined. Taken together, these factors give an indication of the magnitude, riskiness, growth, quality, duration and financing of future free cash flows. It can be argued that the six factors show how much of a company's overall value comes from its current operations, from the tax benefit of debt financing, and from the value of its forward plan. As a conceptual simplification of discounted cash flow, the value-driver model is useful for explaining the fundamentals of valuation to senior managers and key operating people.

The four factors under the control of management are:

NOPAT The net operating profits after taxes (but before financing costs and non-cash-bookkeeping entries) expected on average and over a business cycle from currently held assets

tD The tax benefit of debt associated with management's target capital structure.

- I* The amount of new capital invested for growth in a normal year of the investment cycle.
- r* The after-tax rate of return (in relevant cash flow terms) expected from new capital investments.

The two factors beyond management's control, according to Bennet (1999:300) are:

- c* The cost of capital for business risk, *c* is the return required by lead stakeholders to compensate for the risk in forecasting NOPAT. (When it is combined with the tax benefit of target debt financing, *c* is driven down to *c**, the weighted average cost of debt and equity capital).
- T* The future period of time, in years, over which investors expect management will have attractive investment opportunities. It can be argued that beyond *T*, competition is expected to become so intense that the returns on new projects just cover the cost of capital.

Bennet (1999:300) states that it is very difficult for management to influence *c* and *T*. The cost of capital is determined by the return expectation of investors with diversified portfolios. Managers' attempts to diversify risk on behalf of shareholders will be largely redundant. The latter is true because it is far cheaper and easier for individuals to diversify. Cost of capital for business risk (*c*) will be reduced only if a company can stabilize the return it earns over the business cycle in a way that shareholders could not duplicate through portfolio diversity. (Portfolio diversification is designed to minimize the impact of any one security or investment on overall portfolio performance.)

The chances for companies to diversify successfully at a competitive cost and with ease are so small that, in general, working on *c* is not a worthwhile corporate objective.

Though a company's *T* is determined mostly by an appealing advance of competitive market forces, as well as unforeseeable technological developments, together with the

limitations of size, it is possible that excellent managers can create and extend T in any business.

To summarise Bennet's view on a company's market value, according to the six factors of the Value Driver model, it is suggested that it can be presented as the sum of three components:

- A capitalisation of current operating profits (NOPAT) at a rate that compensates investors for bearing business risks (c).
- The tax benefit of the employed debt in management's *target* capital structure (tD).
- The present value of the economic value added by new capital projects $I(r-c^*)$ that are available until new entrants and substitutes compete away the exceptional profit potential T . ($c^* = WACC =$ weighted average cost of capital). An understanding of how the value of a company and its business units depend on I , (the amount of new capital invested or growth in a normal year of the investment cycle), r , the after-tax rate of return (in relevant cash flow terms) expected from new capital investments, and c (the cost of capital for business risk) and how it changes over time, will often raise important planning and policy issues for management.

One such issue, for instance, is how much debt to employ in the company's capital structure. The disadvantages of too much debt are well known. The benefits of using debt are seldom understood. When debt substitutes equity, one benefit is the implicit replaced cost of equity, at least partially, by an explicit cost of debt, which is tax-deductible and usually much lower.

The present value of the corporate income taxes saved will add into the company's share value, a benefit also reflected as a reduction in the overall, or weighted average cost of capital. A company's optimal *target* capital structure thus is one in which the tax benefit of any additional debt would just be offset by the cost of giving up more financial

flexibility. The optimal level of debt in the capital structure may be higher than is usually believed.

Bennet (1999:304) also indicated that companies or business units for which the third term ($V=D+E$) in the valuation expression mentioned above, has expired may benefit from dropping all pretence of a target capital structure. Instead, one should use debt aggressively to drive greater operating efficiencies into the company, to force the discharge of surplus cash flow, and to draft more managers and employees into the rank of the owners. The act of leveraging to towering heights, and then paying it down, is a process that into itself has a value that supersedes the mere tax benefit of financing. Moreover, as long as a company remains well managed and its business units is as synergistically situated as possible, it has little to fear from a towering leverage ratio, even if its business fortunes deteriorate. The lenders' only recourse must be to accept a swift reversal of the original recapitalisation, for any other action will leave lenders worse off.

Integral to valuation is the cost of capital. All companies and all individual business units within companies have the following four determinants of the costs of capital:

- c** The cost of capital for business risk, is the required return investors will have for the difficulty encountered in accurately forecasting NOPAT. *C* is what the cost of equity would be in the absence of debt financing.
- y** The cost of equity, reflects the difficulty investors will encounter in attempts to accurately forecast the bottom line profits that are available to shareholders. It is equal to *c* plus a premium to compensate shareholders for the risk of leveraging.
- b** $((1-t)(\text{cost of debt}))$
The after tax borrowing-rate of debt.
- t** The corporate marginal income tax rate, the rate at which additional interest expense reduces tax;
- b** The effective after tax interest rate the company would have to pay to raise new permanent debt capital.

- c* The weighted average cost of capital (also known as WACC), can be computed by weighting the after-tax costs of debt and equity in the proportions employed in management's target capital structure.

Better though is the operating approach, which reduces the required return for business risk by the benefit that arises from debt in management's target capital structure. This is the cost of equity and debt based upon the riskiness of cash flows as influenced by business risk, financial risk and market risk either in a stand-alone situation or in a portfolio context.

For the valuation of companies and business units on a stand-alone basis, the weighted average cost of capital (WACC) is the relevant cost of capital. Weighted average cost of capital (WACC) is to discount operating free cash flow to a present value. WACC is used because it is the minimum rate new projects must hurdle to be acceptable. WACC is also the benchmark to judge actual rates of return on capital. In view of its importance, WACC should, when practical, be established for individual business units and capital projects to account for specific business risks and ability to support debt. Otherwise, low-risk, high-debt capacity business units are apt to subsidise high-risk, low-debt-capacity units.

Joubert and Viljoen (1995:5) introduced two different techniques used in valuation of going concerns or for share price of individual shares of such businesses:

- The capitalisation method is a method whereby the calculated sustainable earnings are capitalised for a specified period at a specified discount rate to determine the current value of a business. Value is therefore determined by two variables, namely the sustainable income and the fair rate of return. By implication, the goodwill is the difference between the capitalised value and the value placed on the net tangible assets. If this method is used, goodwill is merely a description of residual value. If the capitalised value of the sustainable earnings is less than the net tangible assets, it indicates that negative goodwill

exists. Under these circumstances, a liquidation value test should be done to determine whether liquidation would not result in fewer losses.

- The author will explain the super profit method in tables 2-1 and 2-2 below. It is important to note that goodwill is accounted for separately when this method is used. Normally, one would assume that, if super profits exist at the time of valuation, it would continue to exist but only for a limited number of years. The duration of the super profits period will depend on the expectations for each case concerned. However, it is possible to extend the super profit period where management justifies such action with a record of extraordinary performance. Examples indicate that the valuation of goodwill is materially influenced by the net tangible asset value. For this reason, the use of the super profits method should be preceded by a complete valuation of the assets, which perhaps accounts for the lack of popularity of this method in practices.

Table 2-1 The super profit method

Assets:	R 75 000	
Fixtures & equipment value	R175 000	
Stock value		
Net Profit/owner salary/perks	R 15 000 per month	R180 000 per annum
Would pay a manager	R 5 000 per month	R 60 000 per annum
Bank interest on fixed deposit	12% per annum	.
Business has been established	5 years	.

Based on the above information, proceed as follows:

Table 2-2 Calculating super profit value

Total Asset Value (a)	(R75 000 + R175 000)	= R250 000
Interest @ 12% on total asset value	= R30 000	.
Salary per annum for manager	= R60 000	.
Total (b) (Interest + salary)	= R90 000	.
Net Profit per annum for business (c) (from table 2.1 above)	= R180 000	.
Super Profit = (c-b)	= R90 000	.
Super profit x (1.25) years	= Goodwill (d)	= R112 500
Value = (a + d)	.	= R362 500

This method says that in exchange for the risk of being in one's own business, a buyer should receive an extra amount over and above what could be earned on money that was placed in a bank if the person worked for a salary.

Asset Value:

This includes fixtures, fittings, plant and machinery that are unencumbered and any assets on lease or hire purchase (HP) that have a value greater than the outstanding debt. Debtors and creditors are omitted from the calculation.

N.B. Property, whether residential or commercial and industrial must NOT be included in the asset value but rather valued separately by the appropriate expert.

Interest Percentage:

The interest rate that an average person could attain from a financial institution, for example the fixed deposit rate, is assumed.

Salary:

The amount an owner would pay a manager to run the business.

N.-B. If the business already has a manager, use his salary if it is realistic. The net profit should then be increased by the amount of the salary to bring it into line with the owner-operated business.

Net Profit per annum:

This is the profit after adding back all the company benefits that the current owner takes out of the business.

Years:

One's experience in the marketplace covers this, but, as a rule of thumb, the following normally apply:

*	a non-service orientated business that has been going a number of years and has a high asset value, from 1.25 (15 months or 1.25 years) to 1.5(18 months or 1.5 years)
*	a service business or a newer established business from 0.75 year (9 months) to 1 year (12 months).

N.B. The period used could vary in different areas the following are examples of area differences:

	Areas	Established	Newer / Service	Established Franchises
1.	Gauteng	(15 - 18 months) 1.25 to 1.5 years	(9 - 12 months) 0.75 to 1 Year	(20 -25 months) 1.67 to 2.08 years
2.	Durban	(15 - 18 months) 1.25 to 1.5 years	(9 - 12 months) 0.75 to 1 Year	(20 -25 months) 1.67 to 2.08 years
3.	Cape Town	(15 - 18 months) 1.25 to 1.5 years	(9 - 12 months) 0.75 to 1 Year	(20 -25 months) 1.67 to 2.08 years

Company value:

Asset value (a) plus goodwill (d).

It is interesting to note that values based on this method benefits businesses with a large tangible asset base. An example is engineering businesses that carry high levels of plant and equipment usually obtaining a relative high value.

- A possible third method for the valuation of a going concern has been distinguished. This method requires that the division of sustainable dividend of ordinary shares by the fair dividend yield to obtain the company and/or share value. The suggestion is that dividends, rather than earnings, determine exchange prices of ordinary shares in South Africa. Perhaps because earnings are markedly influenced by the accounting policies applied by the company while dividends are factual. The dividend approach is an extension of the capitalisation of earnings approach (Joubert & Viljoen, 1995:6) If the mentioned two approaches are correctly applied, equal values will be obtained. Joubert and Viljoen prefer the capitalisation of earnings approach. The reason is that it compels the valuator to judge the composition of the earnings critically in determining sustainable income.

Joubert and Viljoen (1995:6) stated that the free cash flow method does not qualify as a separate method as it merely refers to the amounts the owner of a security can expect from ownership discounted at a fair rate. The published financial statements of a going concern do not show the free cash flow attributable to holders of equity, nor does it readily permit such a calculation.

There is dispute about the concept of negative goodwill. Joubert and Viljoen (1995:7) argued that consideration of negative goodwill is essential for the valuation of a going concern. Specifically when the entity will not be able to, firstly, yield a fair return in the short term, or secondly, where losses are expected. If the net tangible asset value as adjusted for negative goodwill is less than the liquidation value of the business, it may be an indication that the business should consider liquidation. In the latter case, the business should be valued on a liquidation basis.

Joubert and Viljoen (1995:6) further indicated that in the case where a company's most important assets consist of non-specialised fixed property and/or share investments, it would normally be sufficient to value the shares in the company itself on the basis of the value of the net assets. This is required because non-specialised property is usually, and shares are almost always, valued by reference to their expected earnings capacity. Usually, companies owning such assets are in a position to distribute the total net income as cash dividends. When valuing such companies, valuers should benchmark against comparable listed companies for discounts or premiums on net asset value. If differences do occur valuations should be accordingly adjusted. It must be borne in mind that diversification dictates that the risk for a single share is bigger than the risk for an investment portfolio.

2.6 PREPARING FINANCIAL PROJECTIONS

A very important consideration in valuation is the preparation of financial projections, according to Damodaran (2001:27). Martin & Petty (2000:35) also reiterate that financial projections endeavour to quantify the strategies outlined in the business plan. For valuation purposes it is important to remember that it is not only the quantitative financial figures that should be considered. As important is certain qualitative aspects that have a direct impact on the quantity and quality of cash flows to and from the business.

Gow (2003:1) argues that business plans usually include "best guesses" or sometimes, "optimistic" numbers. For early stage companies, it is hard to predict penetration rates for new products or even the adoption rates for new markets. Depending on the stage of a company's development, these projections can be "conservative" or just mere "fantasy".

It may be very difficult, according to Gow (2003:3), especially for early stage companies, to predict the likely revenues and future profits. Sometimes, there are just too many unknowns. The latter creates higher risk for seed or start-up investments, specifically where the technology or the product is yet to be tested for consumer acceptance.

Damodaran (2001:29) argues further that the real aim of financial projections is to provide some insight into when a company will achieve breakeven sales, or for the next stage, achieve acceptable margins.

Knowing when the net cash flows turn positive, or when margins exceed certain levels, is very important and will determine the future viability of the business. (McClure, 2004:3) It will also have an impact on the ability of the company to raise capital. Arguably, financial projections reflect the underlying strategic opportunities.

Gow (2003:3) argues that the business plan needs to clearly outline the value proposition, and explain why the product or service offering is unique. This uniqueness or competitive differentiation will drive sustainable performance. The plan needs to include a detailed market analysis that identifies the size (revenues and volume) and features of the market. Market structure and market growth needs to be fully understood and presented in the projections.

The two key questions are:

- What is the market size and industry growth rate?
- Is the industry structurally attractive with significant barriers to entry?

The first question will highlight the position in the industry life cycle, indicating whether the market is growing, reaching maturity or declining. The second question will give answers to ease-of-entry issues and the protection of competitive position.

Growth markets are generally far more attractive for investors because it is easier to gain market share in a growing market than to fight for market share in a mature or declining market.

Du Toit et al (1997:35) stated that industry structure might lead to significant opportunities or major changes that affect many companies. It is important to consider

the overall industry trends, and specifically industry rivalry to consider the competitive position.

It is obvious that both industry growth and barriers to entry may have a major impact on the financial projections that in turn will affect the valuation of the unlisted company.

2.6.1 Income statement

One of the most important aspects to deal with in the income statement is profit margin (Damodaran, 2001:45). Profit margin is specifically important in the context of determining net profit and the level of break-even sales. In a financial analysis, the breakeven point is defined as fixed costs divided by gross profit margin. In other words, it gives the level of sales required to cover fixed cost. For the purposes of forecasting, the sales figure are based on the expected product price, multiplied by the number of units the business expects to sell. Pricing is, therefore, a critical consideration, and it will determine the level of the profit margin. Investors are generally not interested in low margin businesses.

Profit margins also reflect the costs of production and marketing. In this context, it is important to determine whether the profit margin makes sense when compared to competitor and industry norms. A further consideration is that production and marketing cost will influence, to a large extent, the bargaining power of suppliers and/or customers, as well as economies of scale.

It is finally important to keep in mind that profit margin determines the net income of the business and eventually the cash flows to shareholders and the capital gains on shareholder equity (Damodaran, 2001:29)

2.6.2 Balance sheet

In order to generate the targeted sales, it is necessary to take into account the level of investment required. The following are important considerations, according to Damodaran (2001:26):

- The investment amount required to buy and to convert raw material into finished products, to pay for labour and overheads;
- The length of the cash cycle;
- The time finished products remain in stock before a sale occurs;
- How long it takes for customers to pay for these products; and
- When does the company have to pay its suppliers?

Shee (1983:41) also endorsed that the above questions reflect the working capital cycle of the business and how long it will take to fund the sales cycle. Generating sales may require significant working capital or a major investment in capital equipment. (The longer the cash cycle, the bigger the expected investment in working capital.)

It is important to understand the cash flow implications of the sales cycle and the debtor cycle for the valuation of the unlisted company and other purposes like a new investment. The projected financial statements also need to present any key performance indicators of the business. Indicators like sales growth per annum, sales per employee, profit percentages, or working capital ratios need to be considered.

2.6.3 Sensitivity analysis

The financial projections need to show how the company intends to grow revenues and achieve profitability under different scenarios (Damodaran, 2001:27). For valuation purposes, it is important to consider at least a worst case, most likely, and best-case scenarios. Projections under the different scenarios need to be compared with the industry forecasts. The latter is necessary since it gives an indication whether the company forecast is based on realistic assumptions. If company forecasts deviate

substantially from industry norms, the reasons for the deviation need investigation. Keep in mind that deviations are possible, specifically if competitive edges exist for or against the business under valuation.

Issues to consider include price movements (up as well as down), supplier or customer influences, resource constraints, or the impact of new regulations. From a valuation point of view, it is important to determine whether it is possible for the business to maintain its margins over a five-year period.

Scenario analysis will assist in determining the capital requirements, or valuing the business. Financial projections flow from the strategic options presented in the business plan. However, the underlying assumptions heavily influence the projections. (McTaggart et al., 1994:201).

Assumptions may reflect competitive pressures, economic factors, and the cost and effectiveness of internal processes. The assumptions that feed into the financial projections need to be realistic. If the company is unable to demonstrate clearly the viability or sustainability of the business, raising capital for future growth will be an extremely difficult task and may have an impact on the valuation of the business.

Once the development of the financial projections is finished and different scenarios considered, it is necessary to consider the most appropriate valuation methodology.

Damodaran (2001: 45) states that valuation methodology may be influenced by the stage of the investment (seed, start-up, early or late expansion, bridge funding), the proposed form of exit (IPO – initial public offerings- trade or sale), or company-specific factors (revenue growth, margins, return on investment rates).

2.7 ADJUSTMENT TO THE BALANCE SHEET AND INCOME STATEMENT

The balance sheet should be viewed as only a starting point in determining a company's net worth, as a company may have a value exceeding its stated net worth. However, the balance sheet should be reviewed, and if necessary, the assets and liabilities should be restated in terms of current fair market value. Adjustments may, or may not, have a corresponding effect on the income statement according to Damodaran (2001:26).

Income statements should also be adjusted, if appropriate, as a procedure in the valuation process, according to Damodaran (2001:26). Adjustments are modifications to reported financial information that are relevant and significant to the valuation process and may be appropriate for the following reasons, among others, to:

- Present financial data of the subject company on a consistent basis;
- Adjust revenues and expenses to levels which are reasonably representative of continuing results; and to
- Adjust for revenue and expenses related to non-operating assets and liabilities.

Jones (1992:60) argues that it is necessary to make adjustments to common recurring GAAP adjustments, especially when the financial statements prepared for the subject company have been prepared for tax purposes or for internal financial use. Some of the more common GAAP adjustments are described below:

- *Financial statements prepared on a tax or cash accounting basis:* The rules for tax return financial statements may differ significantly from GAAP. This is especially true in the timing of recognition of revenue and expenses. Sometimes it is acceptable for tax purposes to recognize revenue and expenses on a cash basis rather than on the accrual method, commonly required by GAAP.
- *Unrecorded revenue:* In some industries, there is a tendency for the owner to understate cash sales.
- *Inadequate allowance for bad debts:* Companies with a large volume of credit sales may have exposure in this area. Owners tend to be overly optimistic

- about the collection of accounts receivable. This could also be true of employee or related party receivables.
- *Failure to write down obsolete, slow moving, or damaged inventory:* This is especially common with manufacturers, retailers or distributors with large inventories of numerous products.
 - *Understated inventories:* Some small businesses may try to understate inventories to reduce income taxes. This is especially true for companies without perpetual inventory systems.
 - *Unrecorded prepaid expenses:* Prepaid items are sometimes expensed to save income taxes. Such items should be added back for valuation purposes to get a true picture of the company's assets.
 - *Obsolete, damaged, or abandoned equipment still shown in the financial statements:* Companies with large investments in fixed assets are more likely to have this problem, especially if those assets have not been inventoried recently.
 - *Small tools that have been expensed:* Manufacturing companies may have large numbers of small tools or supplies that were expensed when purchased. Those items should be added back, if material.
 - *Unrecorded liabilities:* This is a common problem with interim financial statements in the event of late bills not recorded in the correct accounting period.
 - *Failure to record capital lease obligations:* Certain leases, especially those involving large trucks or heavy equipment, should normally be classified as capital leases under GAAP. In those cases, both the asset and lease obligation would have to be recorded on the balance sheet.
 - *Failure to accrue for wages, employee benefits and vacation or sick pay:* This can be a material liability if the company has a large workforce.
 - *Failure to use percentage of completion accounting:* This is a common problem for small construction contractors that keep a general ledger on a completed contract basis for tax purposes.

The use of normalisation adjustments determine what the company's operations might have looked like under normal operating conditions, and what a prospective buyer might reasonably be expected to obtain from the company in the future (Jones, 1992:74).

Some of the more common normalisation adjustments include:

- *Non-operating assets and excess assets:* For valuation purposes, the company's balance sheet should present the assets and liabilities of its core operations, assuming a normal capital structure. Thus, adjustments are often required to remove non-operating or excess assets, along with any related debt.
- *Loans to or from related parties:* Loans to affiliates may be non-operating assets. It might be necessary to reclassify loans from affiliates as long-term debt or shareholder equity.
- *Compensation of owner or family members that exceed, or is less than, reasonable levels:* Profitable companies may pay part of the profits to owners as excess compensation. Marginal companies on the other hand, may underpay the owners to improve the company's pre-tax earnings levels. When valuing controlling interests, the income statement is likely to need adjustment to reflect owner's compensation at a reasonable level.
- *Fringe benefits:* As with owner's compensation, profitable companies often expense personal expenses for the owner, which should be eliminated.
- *Non-recurring income and expenses:* Non-recurring income and expenses should be excluded from the income statement. Examples include moving expenses, gains or losses on the sale or disposition of fixed assets, and extraordinary items.
- *Income and expenses related to excess assets, non-operating assets, and asset shortages:* Should the balance sheet need adjustment for excess assets, non-operating assets, or asset shortages, the income statement would also need adjustment for any related income and expenses.
- *Related party revenues and expenses:* Closely held companies often have arrangements with related parties, such as leases, management fee and other arrangements. If any such arrangements are unrelated to the company's core business, and a controlling interest is being valued, income or expenses related

to those arrangements should be eliminated. If those arrangements do relate to the core operations, but are not at arm's length terms, adjustments market rates become necessary.

- *Income taxes:* Normally, income statement adjustments are done on a pre-tax basis. After making those adjustments, income taxes should be re-computed based on the normalised pre-tax earnings and the tax rates in effect at the valuation date.

2.8 DISCOUNTS AND PREMIUMS

After valuing a company, a variety of adjustments may be necessary to arrive at an appropriate estimate of the company's value (Barker, 2001:47). Although every case is unique and requires specific adjustments for the situation the three adjustments that are often considered are the key person discount (or premium), a liquidity discount and a control premium (or minority discount)

2.8.1 Key person discount or premium

Barker (2001:48) argues further that the departure (or death) of a key person in a business may have a significant effect on the company's future prospects. If such a person's departure is expecting to have a significant effect (either positive or negative) on the company's income, an adjustment should be made to reflect the impact that the person's departure will have on expected future company income. Issues that may have an impact on prospective income include costs, revenues, special expertise, or replacement issues. The departing person may have had the ability to keep costs down through tough negotiating as a buyer or strict quality control procedures. Alternatively, the departing person may have caused costs to be abnormally high by taking fringe benefits, or running an inefficient operation.

In the event that a dynamic person with well-established customer relations, depart from the company, it may have a negative effect on the company's future revenue. Alternatively, the departure of an overly controlling leader that hindered sales will probably have a positive impact on the company's future revenue.

In addition to the overall company outlook, it is also necessary to factor in the actual replacement costs for the departing person (Barker, 2001:49). Associated costs may include advertising, interviewing, paying recruiter fees, and having others in temporary executive positions. Projected income statements must reflect the likely compensation and/or cost associated with the newly appointed employee, not the compensation and/or cost associated with the departing person.

While each case has its own unique set of facts, some similarities exist across cases, which allow one to estimate "ballpark" figures for key person discounts. Recent data by Barker (2001:51) however, indicates that the average discount rate dropped to 5-10 percent.

The author is of the opinion that in the case of Black Economic Empowerment deals, it is likely that a key person discount could be applied if a person that plays a significant role exists in the business. If the key person deals specifically with suppliers and customer relations it is possible that the successor to the key person:

- might not be able to purchase materials and products as cheaply as the predecessor; and
- might not be able to sell as many products, or to sell products at the same or higher prices, as the previous job occupant to existing and/or new customers.

The aim should be to limit the impact of the above on key person discount and/or premiums. It is therefore important to balance the profits and/or losses as described above, to the extent that it is possible, with the compensation structure of the person that replaces the key person. The latter may result in a much lower salary and less fringe benefits, for example, a company car and apartment to the new employee.

2.8.2 Liquidity and marketability discounts

In contrast to shares of public companies that trade actively on security markets, ownership interests (shares) in unlisted and closely held companies are typically not readily marketable or liquid. Consequently, it is often appropriate to apply a discount to the value of the unlisted or closely held shares to reflect the potential reduction in share value attributed to the lack of liquidity and marketability. (Barker, 2001:57)

The impact of a lack of marketability on the fair market value of an equity interest in unlisted companies, has been analysed by numerous independent financial companies, and recognised by the Courts for a long time.

2.8.3 Control premium and minority discount

The control premium (as well as the minority discount) reflects the fact that a shareholder with majority interests in a company has the opportunity to make all decisions (including dividend decisions), gain fringe benefits, and receive a salary. In this way, the “value per share” that the majority shareholder gains from an investment in that specific company is greater than that of a minority shareholder. It is important to realise that the latter argument ignores the principle of professional management. The professional management principle requires the separation of that ownership interest and financial gains from remuneration for professional management of the business. The latter applies irrespective of whether the manager is a shareholder or only a professional manager without ownership interest in the company. The real risk for minority shareholders lies in the possible alienation of assets and business activity. The latter however is a criminal offence and can be dealt with legally. Some valuation methodologies estimate the price (value) of a single share of stock (i.e., a “minority” value per share), while others estimate the value of an entire company (from which a “majority” price per share may be inferred). The level of shareholder ownership (i.e., majority or minority) must correspond to the type of valuation method employed, or else a control premium or a minority discount should be applied. Generally, a discounted

earnings method determines a majority price, while a market multiple method determines a minority price; therefore, the following adjustments are generally appropriate using these methodologies.

2.8.4 Applications of premiums or discounts

Once the percentage premiums or discounts for the key person effect, liquidity and control have been estimated it may be applied to adjust the before premiums/discount value of the business to an after premiums/discount value.

The author explains as follows: suppose that the before-premiums and discounts value of Mr. X's shares in the company are calculated at R42 million, and that:

- the key person discount was estimated to be 5 percent;
- the liquidity discount was estimated as 10 percent; and
- the control premium was estimated at 15 percent.

According to the above arguments the value of Mr X's shares can be computed as follows: $R42m (100\%-30\%) = R29,4m$.

2.9 VALUATION METHODS AND MODELS

Valuation of businesses and/or company shares relies on methods and models developed for this purpose. Every method or model has advantages and disadvantages. Some are more contemporary while others are older. Keeping the valuation needs, at present, in mind, some of the most relevant models are discussed below.

2.9.1 Earnings multiple models

The capitalisation of future earnings approach is based on using an appropriate multiple and applying that to the projected earnings. The capitalisation of future earnings approach is easy to understand. The latter is probably one of the reasons why it is, according to perception, used rather widely in both the listed and unlisted company

market sector. This approach does however cause some difficulties with the calculation of “maintainable” earnings and the selection of appropriate multiples. In principle, this method uses earnings multiples to determine company value, for example, net income multiplied with the price earnings multiple. Other examples are EBIT (earnings before interest and tax) or EBITDA (earnings before interest, tax, depreciation and amortisation) multiple or a cash flow multiple. (Mullen, 2003:1)

For example, if the price earnings multiple is used, the calculation requires that the price earnings multiple be multiplied by the net profit after tax. If the company is trading at a price earnings multiple of 10 and has a net profit after tax of R5 million, the implied value of the business is (10 X R5m) R50 million.

This valuation method is generally not suitable for companies in the seed, start-up or early stages of development. It is also inappropriate for turnaround or loss-making companies (Damodaran, 2001:43).

The selection of the multiple and earnings estimates will be of significant interest to the potential investor. Both multiple increases and the earnings growth will have a positive effect on value. Two separate factors therefore join forces to increase the value. Venture capital managers are keenly aware of this dynamic. Venture capital managers are therefore aiming to buy low (with low multiples) then add value (by boosting earnings) and eventually sell high.

2.9.2 Capitalisation of current earnings approach

The capitalisation of current earnings and cash flow approach determines value based on historic earnings and cash flows respectively. This method tends to be more appropriate when a company's current operations are indicative of its future operations. According to this method, the value is determined by dividing a historic benefit stream (earnings or cash flow) by a capitalisation rate (Joubert & Viljoen, 1995:43).

2.9.3 Benefit stream

The benefit stream to be capitalised depends on the facts and circumstances of the subject company. In some cases, it is appropriate to develop a benefit stream based on the company's earnings or cash flow for each of the years covered in the analysis, and in other cases, a benefit stream based on recent earnings or cash flows is appropriate, according to Joubert and Viljoen (1995:44).

2.9.4 Capitalisation rate

One can often derive the capitalisation rate from the company's discount rate. The discount rate is determined based on cost of capital as influenced by company and market risk. To calculate the capitalisation rate the assumption is that the business has a perpetual life and that the annual percentage growth or decline of the business will fluctuate around a single, predictable trend line. The capitalisation rate is calculated as follows:

$$\text{Capitalisation Rate} = (\text{Discount Rate} - \text{Growth Rate}) / (1 + \text{Growth Rate})$$

It is important to ensure that the capitalisation rate is applicable in terms of time, risk, and growth for the benefit stream under consideration (Palepu et al., 2000:3-15).

2.9.5 Conversion process

It is necessary at this stage to clarify two concepts, namely **net earnings** and **net cash flow**. Net earnings are the amount calculated in the income statement: operating income less operating expenses less tax (historic financial data). **Net cash flow** is the amount of cash inflow less cash outflow to fund future operational expenses.

Typically, the discount rate computed is deemed a net cash flow discount rate. If the benefit stream to be capitalised is net cash flow, the only adjustment required is to convert the net cash flow discount rate into a net cash flow capitalisation rate. However, if the benefit stream to be capitalised is a net earnings stream, the net cash flow discount rate should be converted into a net earnings discount rate, and then into a net earnings capitalisation rate (Bennet, 1999:254).

A company's net cash flow is usually, but not always, less than its net earnings. Consequently, a company's net cash flow discount rate is usually, but not always, less than its net earnings discount rate. When converting a net cash flow discount rate into a net earnings discount rate, it is useful to consider the following relationships:

- The higher the net cash flow discount rate in relation to net income, the higher the difference between the net cash flow discount rate and the net earnings discount rate.
- The higher the ratio between net income and net cash flow, the bigger the difference between the net cash flow and net earnings discount rates.
- The higher the growth rate, the smaller the difference between the net cash flow and net earnings discount rates.

Two accepted techniques exist for converting a company's net cash flow discount rate into a net earnings discount rate, according to Joubert and Viljoen (1995:15).

(1) Determine the percentage difference between net cash flow and net earnings normally experienced by public companies in the company's industry, and adjust the net cash flow by the differential as calculated;

(2) Compute the percentage difference between the company's net cash flow and its net earnings, and adjust the net cash flow by the differential as calculated.

Once the appropriate discount rate has been determined (net cash flow or net earnings), the next step is to convert the discount rate into a capitalisation rate. As mentioned previously, in assuming that the business has a perpetual life, and the annual

percentage growth or decline of the business will fluctuate around a single, predictable trend line, it is possible to quantify the capitalisation rate as follows:

$$\text{Capitalisation Rate} = (\text{Discount Rate} - \text{Growth Rate}) / (1 + \text{Growth Rate})$$

In this instance, the growth rate represents the annually compounded percentage rate of growth in perpetuity for the economic variable being capitalised (i.e. net cash flow or net earnings). It is important to note that a capitalisation rate computed in the equation above should be applied to a future projected benefit stream. To apply the capitalisation rate to a company's recent historical benefit stream, adjustment of the capitalisation rate follows as:

$$\text{Capitalisation Rate} = (\text{Discount Rate} - \text{Growth Rate}) / (1 + \text{Growth Rate})$$

Thus, the capitalisation rate decreases as (1) the growth rate increases and (2) the discount rate decreases.

2.9.6 Discounted cash flow approach

As Damodaran (2001:3) stated, the discounted cash flow approach is generally applied to value companies, acquisitions, or investment opportunities based on expected future cash flows. This approach is specifically applicable for the valuation of companies in the early stages of development. The reason is that start-up and early stage companies have very little or no past cash flows but expect to have cash flows in the future. Other specific applications are for companies with lumpy cash flows or companies seeking to break even in the near future.

Cash flow figures obtained from financial projections are substituted and used in the discounted cash flow model. Except for ensuring that the cash flow stream used in this procedure is of quality, two other important issues need consideration. These issues are, firstly, selection of an appropriate discount rate and the calculation of the "terminal

value". The terminal value is the value of the share or operation at a certain point in time in the future. For the purpose of valuation, the terminal value of a company or share is usually calculated at the last point in time of the time line under consideration.

Depending on the stage of the investment, according to Damodaran (2001:3), seed, start-up, early or late expansion, or bridge, different discount rates will apply to reflect the riskiness of cash flows. Some of the factors that will have an impact on risk are liquidity, marketability, management and other company specific and market-related issues. It is expected that a premium will be included in the discount rate to reflect the illiquid nature of unlisted companies' shares.

The terminal value, depending on the future earnings potential, expected growth rate of the business and the discount rate, might have a significant influence on company or share value (Damodaran, 2001:6).

Depending on the valuation methodology used, the impact of the independent variables earnings potential, expected growth and discount rate may vary. The discounted cash flow valuation procedure reflects two components: firstly, valuation of future cash flows for a specified period and secondly, the valuation of earnings beyond the specified period. The valuation of expected earnings for the beyond specified period results in the terminal value.

2.9.7 Discounted cash flow valuation model

2.9.7.1 Overview of the process

According to the discounted cash flow approach, the value of a company is the present value of expected future cash flows, discounted to present value at a composite cost of capital that reflects both the sources and costs of capital. This general statement applies no matter what kind of company is involved, but the ease with which cash flows and discount rates can be estimated, can vary, according to Ross et al (1999:485). At one end of the continuum, there are companies with a long history, positive earnings and

predictable growth. The estimation of growth rates in earnings is easy for use in forecasting future earnings. For companies that do not have a track record the task is made easier if companies exist to compare the company against, where “comparable” means a company in the same line of business, with similar characteristics. The information on these companies can then be used to estimate risk parameters and discount rates. (Damodaran, 2001:6)

The real test for valuation is on the other end of the continuum, where there are start-up and young companies with negative earnings, limited and noisy information. Often the latter problems compound because these companies are in sectors where there is either no comparable company, or the comparable companies are at the same stage in the life cycle as the company being valued. This is true, especially when the South African Black Economic Empowerment drive is considered. In this case, the estimation of cash flows and discount rates become difficult and valuation often seems to be a stab in the dark.

Often valuers assume that companies of this nature cannot be valued using valuation models. This report focuses also on the mentioned type of companies, those that are due to constraints not easy to value.

The value of any asset is a function of cash flows generated by the asset, the expected life span of the asset, the expected growth in the cash flows and the riskiness associated with the cash flows. In a more formal financial context, one can say that the value of an asset should be viewed as the present value of the expected cash flows of that asset. The basic formula for the calculation of present value and/or value of a company is given and explained below.

$$\text{Value of asset} = \sum_{t=1}^{t=N} \frac{E(\text{Cashflow}_t)}{1+r}$$

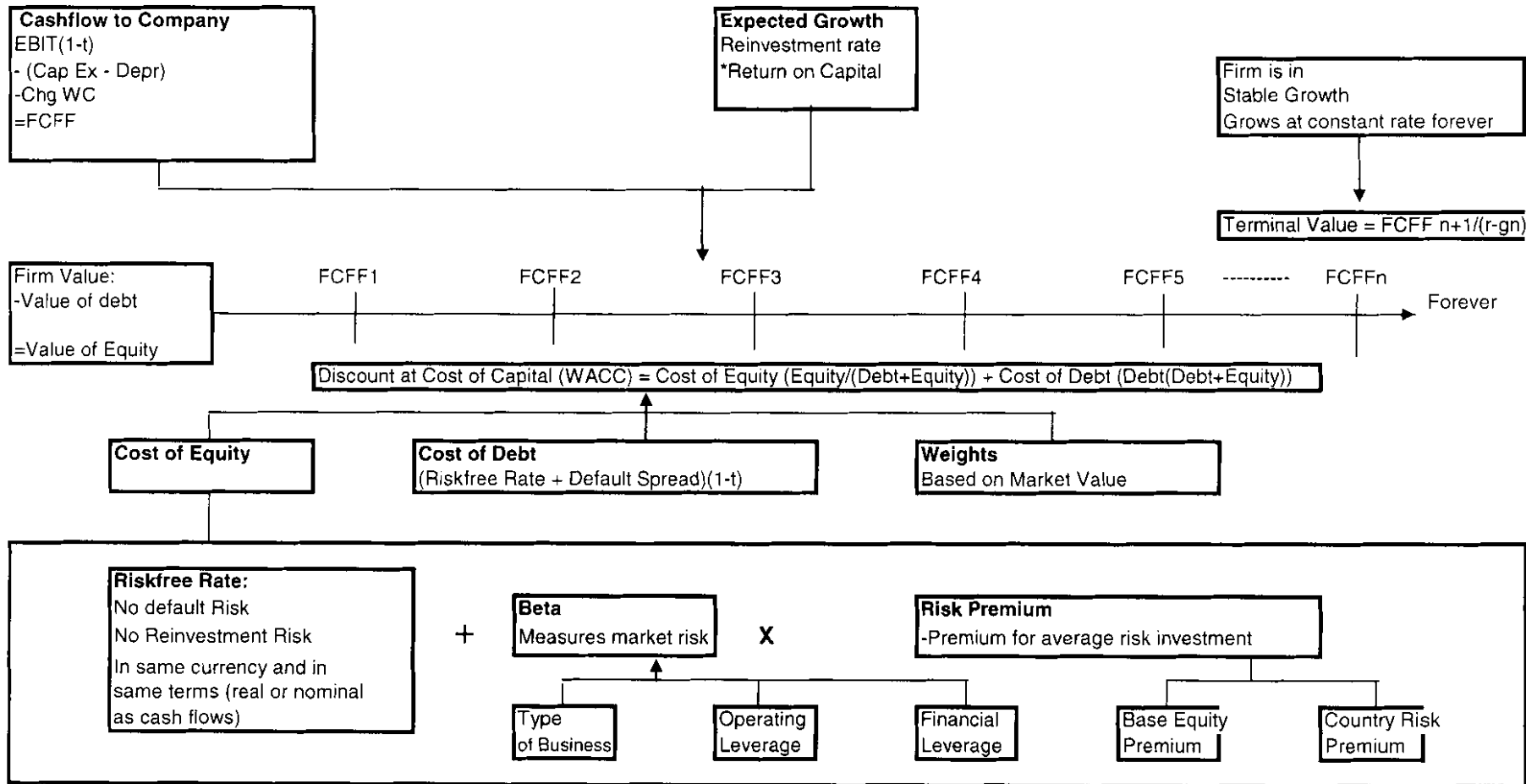
Where the asset has a life of **N** years and **r** is the discount rate that reflects both the riskiness of the cash flows and financing mix used to acquire it. Because a company is a

collection of assets, this approach can be extended to the valuation of a company, using cash flows to the company over its life and a discount rate that reflects the collective risk of the company's assets.

$$\text{Free Cash Flow (FCF)} = \text{EBIT} (1-\text{tax rate}) - (\text{Capital expenditures} - \text{Depreciation}) - \text{Change in net working capital}$$

The flow process can be seen in the chart that follows (Fig 2.1):

Figure: 2.1 The Discounted Cash Flow Process



Source: Damodaran, A. (2001:24)

Positive capital expenditures and an increase in net working capital represent an investment made by the company to generate future or contemporaneous growth.

In valuation, expected future cash flows determine value. While the definition of the cash flow, described above, still holds, it is the forecasts of earnings, net capital expenditures and working capital that will yield these cash flows. One of the most significant inputs into a valuation is the expected growth rate in operating income. While one could use past growth or consider analyst forecasting to make the estimate, the fundamentals that drive growth are simple. The expected growth in operating income is a product of a company's reinvestment rate, i.e. the proportion after tax operating income invested in net capital expenditures and changes in non-cash working capital, and the quality of these reinvestments, measures as the return on the capital invested.

Expected growth_{EBIT} = Reinvestment Rate • Return on Capital

Where,

$$\text{Reinvestment rate} = \frac{\text{Capital expenditure} - \text{Depreciation} + \Delta \text{ Non-Cash Working capital}}{\text{EBIT} (1 - \text{tax rate})}$$

And,

Return on Capital = EBIT (1-t) / Capital Invested

(Source: Damodaran, Stern Business School, New York. 2002)

Both measures should be forward looking, and the return on capital should represent the expected return on capital on future investments.

The expected cash flows need discounting back at a rate that reflects the cost of financing these assets. The cost of capital is a composite cost of financing that reflects the costs of both debt and equity, and the relative weight of each in the financing structure:

$$\text{Weighted average cost of capital (WACC)} = k_{\text{equity}} (\text{Equity} / (\text{Debt} + \text{Equity})) + k_{\text{debt}} (\text{Debt} / (\text{Debt} + \text{Equity}))$$

k_{equity} Cost of equity

k_{debt} Cost of debt

Estimation of cash flows has to stop some time in the future as well as computing a terminal value that reflects all cash flows beyond that point. A number of different approaches exist for computing the terminal value, including the use of multiples. The approach that is most consistent with a discounted cash flow model is one where the assumption is that cash flows, beyond the terminal year will grow at a constant rate (**g**) forever, in which case terminal value in year **n** can be estimated as follows:

$$\text{Terminal value}_n = \text{FCF}_{n+1} / (\text{WACC}_{n+1} - g_n)$$

In the above formula, the assumptions are that the cost of capital and the growth rate are constant and sustainable forever. The latter allows the valuator to constrain the movements of the mentioned variables within certain limits. It is, for example, reasonable to assume that no company can grow forever, at a rate higher than the growth rate of the industry in which it operates. The long-term expected growth rate can therefore not be higher than the overall industry growth rate.

To value a company, the starting point is by estimating how long high growth will last, how high the growth rate will be during that period and the cash flows during the period.

A terminal value must be estimated and discounting of all the cash flows, including the terminal value, back to the present to estimate the value of the company.

Figure 2.1 (p 45) summarises the flow of the process.

2.9.7.2 Determining the appropriate discount rate

– Weighted Average Cost of Capital

The discount rate is the rate of return at which an investor (shareholder or lender) would be willing to invest in an asset or business, given a perceived level of risk.

The discount rates for debt and equity differ because debt holders receive relatively certain income (interest and principal). The income of shareholders (dividends and price increases) on the other hand, is less certain. In addition, debt holders are paid first under conditions of financial distress. The discount rate for suppliers of debt is lower because of the perceived lower level of risk.

$$WACC = w_d k_d (1-T) + w_{ps} k_{ps} + w_{ce} k_s$$

WACC Weighted Average Cost of Capital

W_d Weight of debt;

k_d Before-tax cost of debt;

W_{ps} Weight of preferred stock

k_{ps} Cost of preferred stock

W_{ce} Weight of common equity

k_s Cost of retained earnings, cost of common stock

– The Cost of Equity

For an “equity” cash flow definition (which does not include the benefit to debt holders), the appropriate discount rate is the cost of equity. Many methods are employed to estimate the cost of equity (k_s). According to Brigham & Ehrhardt (2002: 248), the Capital Asset Pricing Model (CAPM) seems to be the most commonly used to determine cost of equity for large companies. According to CAPM, the cost of equity is a function of

the risk-free rate of return (K_{RF}), the company's volatility in relation to the market (β), and a market risk premium (M_{RP}).

Cost of capital, according to CAPM, is calculated as follows: $k_s = k_{RF} + (M_{RP})\beta$

The risk-free rate is typically the current rate on government medium to long-term bond rates. The market risk premium is the difference between the historic return of a "market" portfolio of shares and the risk-free rate of return. Determining β is relatively more complex.

Beta(β) is a proxy for risk. β measures the rate of return movement of a specific share against the rate of return movement of the entire market. The following demonstrates the beta concept: if the rate of return of a share increases (decreases) by 2% when the market rate of return increases (decreases) by 1% only, for a specific period, the share would have a β of 2 (2/1). The β for the market as a whole will always be one.

Beta's (β 's) are computed and published for public companies (usually based on 60 months' data). For unlisted companies, it is appropriate to use the β 's of "comparable" companies (same industry, similar size, etc.) as proxies. However, β 's of companies with more debt are higher because they are more likely to face financial distress. Therefore, a β of a "comparable" public company cannot be applied directly to a private company, because of the different levels of debt (as a percentage of their equity).

To adjust the reported β 's of public companies and applying it to a private company, a two-step process is typically employed:

- (1) Convert the reported (levered) β of the public companies to a debt free (unlevered) β using each of those public companies' debt/equity ratios; and
- (2) Use the unlevered β and the private company's debt/equity ratio, compute its appropriate levered β . (Mullen. 2003:5)

In these equations, T refers to the company's marginal tax rate, D/E to the debt/equity ratio, β_U to the unlevered β of the public company, and β_L to the levered β s of the public

(pub) and private (pri) companies. The levered approximated (levered) β of the private company can then be used in the CAPM equation to determine the cost of equity of the firm.

It is necessary to make these levering/unlevering transformations, although the formulas appear to be somewhat complex. The result of the analysis may be very different, and “wrong”, by merely using the reported β 's of public companies.

$$\beta_U = \frac{\beta_{L, pub}}{1 + (1 - T)(D/E)}; \quad \beta_{L, pri} = \beta_U [1 + (1 - T)(D/E)].$$

Additional risk premium represents the additional risk associated with an investment in a smaller closely held unlisted company. The risk premium captures factors such as industry risk, financial risk, diversification risk (for example, products, customer base and geographic location) and additional operational risks (for example: management depth and competence). Table 2-3 below shows the risk premiums for specified categories of risk-based on the presence of specified risk factors for the unlisted business sector.

Table 2-3: Business factors and risk premiums

Category	Risk Premium	Factors
1	6 - 10%	Established business; strong second-line management; history of stable earnings; predictable future
2	11 - 15%	Established business in a more competitive environment; good second-line management; stable earnings; more or less predictable future
3	16 - 20%	Business in a highly competitive industry that requires small capital investment to enter; good performance in past years, but uncertain future
4	21 - 25%	Small business that depends on the skill of one or two people; or larger businesses that are highly cyclical; very uncertain future
5	26 - 30%	Small "one-man" businesses of a personal service nature where the continuity of income is doubtful

(Source: Damodaran, 2001: 48)

– **Cost of Debt**

A company's cost of debt is much simpler to calculate. It is merely the weighted average (weighted by the principal amounts in the debt structure) interest rate it pays on its debt.

The author will demonstrate the calculation of weighted average cost of debt (WACD) in table 2-4:

Table 2-4: Weighted average cost of debt (WACD)

Debt Structure	Debt Amount (a)	Interest (%) (b)	Weight (c)	Unit cost (b*c)
Debt 1	R2 500 000	9	0.15	1.35
Debt 2	R6 800 000	10	0.40	4.00
Debt 3	R7 700 000	12	0.45	5.40
WACD				= 10.75

The WACD-calculation is done by adding up the unit costs (1.35 +4.00 +5.40).

- Terminal Value

The value of a company must incorporate all of the future income expected for the shareholders. Therefore, it is necessary to make adjustments for company projections in which income projections have been made for a specific number of years, but income is expected to be earned indefinitely after that time. In fact, this is typically the case, as projections rarely last beyond 10 years, although companies have to operate after that time.

For companies that only have “n” years of projections, the “Terminal Value” (TV) estimates the value of all future income after year n (discounted back to year n).

Discounting the terminal value back to present day and combining it with the present value of the *projected* income flows, the value of the firm can be summarised as:

$$PV = \sum_{t=N+1}^{\infty} \frac{FCF_t}{(1+WACC)^{t-N}}$$

2.9.8 Sensitivity analysis

In practice, more than one valuation method may be employed in a valuation analysis. There may be some theoretical reasons why the results of certain valuation methods or procedures are preferred. However, in practice, it is a matter of testing for reasonableness, judgement and sensitivity, which determine the appropriate value. Tests of reasonableness include conformance of results, anecdotal evidence of private sales near the time of valuation, and bids for the company. Since growth rates and discount rates are estimates, it is also important to consider the sensitivity of results to small changes in these variables. An undemanding, but visually effective way to consider sensitivity is to examine a matrix of present values for different growth and discount rate assumptions. In Table 2-5 the author demonstrates how the value of a company with an income of R100 changes with changes in the growth rate and discount rates. It is clear that the valuation estimate nearly doubles from R1167 to R2148 if the growth rate increases from 5 to 7 percent and the discount rate decreases from 14 to 12 percent.

Table 2-5 Cash flow to equity

Cash Flow to Equity: Valuation Estimates Based on Various Growth and Discount Rates					
Growth/ Discount	12 %	13 %	14 %	15 %	16 %
3 percent	1146	1032	943	860	794
4 percent	1303	1158	1,047	948	869
5 percent	1495	1308	1167	1045	950
6 percent	1772	1519	1334	1182	1063
7 percent	2148	1790	1539	1342	1193

2.9.9 Intangible/intellectual property valuation

2.9.9.1 Overview

Intangible assets are created by a business in order to carry out daily activities. Examples include assembled work force, computer software, licenses, recertifications, favourable contracts, and subscription/customer lists.

Intellectual property acquires its characteristics, from which value emanates, from the legal system. Examples include patents, copyrights, trademarks, and proprietary technology.

There are a number of reasons for valuing intangible assets and intellectual property, including purchase price allocation, transfer pricing, collateral for loans, and litigation. Intangible assets/intellectual property can be valued in a number of ways. The most common and straightforward to apply are the cost, market, and income approaches.

The cost approach (which usually yields the lowest value) focuses on the cost to create the intangible/intellectual property. It does not consider any goodwill.

A market approach develops investor ratios for comparable companies with similar intangibles and intellectual property. The value is estimated by quantifying the increase in the investor ratios due to intangibles/intellectual property. Projected economic income (the returns beyond competitive profits) is discounted under the income approach.

2.9.9.2 Sum of the years valuation method

This method estimates the value of the intellectual/intangible property as the present value of its future after tax royalty stream. Table 2-6 demonstrates this method. In this instance, the value is R2363300.

Table 2- 6 Sum of the years method

Year	(a) Royalties	(b) Taxes @ 40%	(c) Net	(d) 15%Present value factor	(e) Present value
1	R1000,000	R400000	R600000	0.87	R522000
2	R1100000	R440000	R660000	0.76	R501600
3	R1200000	R480000	R720000	0.66	R475200
4	R1300000	R520000	R780000	0.57	R444500
5	R1400000	R560000	R840000	0.50	R420000
					R2363300

- (a) Royalties:** Projected for a five year period
- (b) Tax:** calculated @ 40% tax rate
- (c) Net:** Royalties less tax
- (d) Present values factor – 15% PV-factor**
- (e) Calculation of Present Value**

2.9.9.3 Relief from royalty valuation method

Relief from royalty refers to the process of quantifying a market royalty rate paid for the intangible/intellectual property. The selection of an appropriate royalty rate requires a careful consideration of a broad range of factors including industry, nature, the level of exclusivity, and the level of incremental profits/cost savings, terms and industry comparable rates.

2.9.9.4 Required after tax return for intellectual property

The following table designed by the author calculates the weighted average cost of capital as well as the required after tax return. The required return is necessary to calculate the value of the intellectual property.

Table 2-7 Required return

	(a) Fair Market Value	(b) Fair Market Value (%)	(c) Required Rate of Return	(d) Weighted Rate of Return	(e) Required Amount of Return	(f) Required After Tax Return
Working Capital	R3000000	12.0%	7.0%	0.84%	R210000	R140000
Real Estate	R2000000	8.0%	8.0%	0.64%	R160000	R107500
Equipment	R5000000	20.0%	8.5%	1.70%	R425000	R282500
Intellectual Property	R15000000	60.0%	19.7%	11.82%	R2955000	R1970000
Total	R25000000	100.0%		15.0%	R3750000	R2500000

$$Value = \frac{Debt\ free\ net\ income}{WACC - Growth\ Rate} = \frac{R2.5\ Million}{15\% - 5\%} = R25\ Million$$

2.9.9.5 Present value of calculated royalties

Table 2-8 indicates the calculation of the present value of calculated royalties:

Table 2- 8 Present value of calculated royalties

Year	(a) Sales	(b) Royalty Rate@ 6.6%	(c) Taxes @ 40%	(d) Net	(e) Present Value Factor @ 12%	(f) Present Value
1	R30000000	R1980000	R790000	R1188000	0.89	R1057320
2	R33000000	R2178000	R871200	R1306800	0.80	R1045440
3	R36000000	R2376000	R950400	R1425600	0.71	R1012176
4	R40000000	R2640000	R1056000	R1584000	0.64	R1013760
5	R44000000	R2904000	R1161600	R1742400	0.57	R993168
						R5121864

(a) **Sales** – Projected sales for a five-year period

(b) **Royalty Rate @ 6.6%** - Required After Tax Return on Intellectual Property/Annual Sales (R1.98m/R30m = 6.6%)

(c) **Taxes @ 40%**

(d) **Net = (b) – (c)**

(e) **Present Value Factor @ 12%**

(f) **Present Value calculated**

2.9.9.6 Excess earnings valuation method

This method takes the present value of the return to intangibles; where intangible return is calculated as a portion of a company's total debt-free cash flow. The following tables demonstrate this method:

Table 2- 9 Debt-free cash flow calculation

	Year 1	Year 2	Year 3	Year 4	Year 5
(a) Sales	R30000000	R33000000	R36000000	R40000000	R44000000
(b) Debt free net income	R2500000	R2740000	R3000000	R3320000	R3650000
(c) Depreciation	R500000	R600000	R700000	R700000	R800000
(d) Capital Expenditures	(R500000)	(R500000)	(R500000)	(R600000)	(R600000)
(e) Working capital increase	(R300000)	(R300000)	(R300000)	(R400000)	(R400000)
(f) Debt free cash flow	R2200000	R2540000	R2900000	R3020000	R3450000

Debt-free cash flow (f) = (b) + (c) + (d) +(e)

Table 2- 10 Allocation of debt-free cash flow

	Year 1	Year 2	Year 3	Year 4	Year 5
(a) Working Capital	R200000	R300000	R300000	R300000	R400000
(b) Fixed Assets	R600000	R650000	R700000	R750000	R800000
(c) Intangibles	R1400000	R1590,000	R1900,000	R1970,000	R2250000
(d) Debt-Free Cash Flow	R2200000	R2540000	R2900000	R3020000	R3450000

The total debt-free cash flow is allocated to the abovementioned items.

Table 2-11 Excess earnings valuation method

	Year 1	Year 2	Year 3	Year 4	Year 5
(a) Intangible Allocation	R1400000	R1590000	R1900000	R1970000	R2250000
(b) Present value discount factor	0.83	0.69	0.58	0.48	0.40
(c) Present Value	R1162000	R1097100	R1102000	R945600	R900000
Value of Intangibles					<u>R5206700</u>

(a)*(b) = (c).

Value of intangibles = the sum of (c) for years1-5

2.9.9.7 Comparable transactions, profit splits

To determine an appropriate royalty rate or purchase price value of certain intellectual property, it is helpful to examine what the same or similar intellectual property has sold for in transactions between willing licensors and licensees. The best place to begin a search for such comparable agreements is the company that is being valued, which may have licensed or sold the same or similar intellectual property to a third party. Since intellectual property by its nature is unique, it may be difficult or impossible to find comparable licensing agreements or other financial data to estimate the value of the property. In such cases, or as a secondary method/test of reasonableness, profit splits and rules of thumb may be considered. Two profit split methods often employed are the residual and comparable profit splits. The residual method splits the remaining profit, in other words, profits over and above that for routine operations, perceived as the intellectual property (capital) equally between the licensor and licensee. According to the comparable method, the entire profit is split in a manner that is comparable to what would have been acceptable to other willing parties in a similar situation.

While these methods state how to implement a split, there is little guidance on exactly how the percentage split should be made. There is, however, a rule of thumb based on surveys that suggests the licensor gets 25-50 percent of the total profit (S A Franchise Association of South Africa, 2004).

2.9.10 Net asset value approach

In a limited number of situations, a company's worth is measured by reference to the net value of its underlying assets. This approach consists of the Adjusted Book Value Method and Liquidation Value Method. Both of these methods determine value based on a hypothetical sale of the company's assets rather than focusing on earnings potential. The mentioned methods are generally used if the subject company (1) is an investment or holding type of company with significant tangible assets; (2) has no established earnings history or a volatile earnings history; or (3) is not able to continue as a going concern.

The Adjusted Book Value method involves adjusting the company's assets and liabilities to their appraised values to determine the value of the company. (Copeland et al., 1992:83).

A key consideration in the adjusted book value method is to recast the current balance sheet data to change it from an accounting basis to an economic basis. The latter requires that the value of fixed assets should be adjusted to reflect the true market value; revising inventory figures to market value; and determining the value of any off-balance sheet intangibles. Liabilities may also require adjustment to record such items as contingent liabilities. Copeland et al is also of the opinion that adjustments may be required to reflect the potential income tax implications from a presumed sale of the assets.

The Liquidation Value method involves discounting the net proceeds from liquidating the company's assets and paying off its liabilities to determine the value of the company.

In situations where a company has had a history of losses, or where the sole owner-manager has died and the company's future is in doubt, it is reasonable to value the company based on the Liquidation Value method. In these cases, the adjusted book value is adjusted again to include the costs of liquidation and the potential income tax implications of disposing of the company's assets.

2.9.11 P/E ratio as a valuation model

Barker (2001:1) is of the opinion that the P/E ratio is a valuation model, because it is a formal relationship between the share price of a company and an underlying determinant of that share price. Given an understanding of the assumptions and parameters of the model, the user can go directly from a forecast of earnings to an estimation of the share price. One reason for favouring the P/E ratio might be that earnings are considered an effective summary measure of the financial performance of a company. The P/E ratio is therefore a simple valuation model that makes use of data that are readily available and directly relevant. Any other valuation model might produce the same answer, but in a less convenient way. The usefulness of any given valuation model depends, therefore, upon data that are available to users.

Barker (2001:1) analyses the extent to which earnings are a good measure of financial performance and thereby whether the P/E ratio is, in fact, a useful valuation model. This raises the issue of "earnings quality", and highlights the need to understand data issues, in addition to understanding the methodology of valuation. The analyses of the P/E ratio will address questions such as:

- Under what set of conditions is there a direct relationship between a company's share price and its earnings?
- How can the P/E ratio be reconciled to other valuation models, such as the dividend yield, shareholder value model or economic value added?
- What causes variation in P/E ratios across time and between companies?
- Can the manipulation of earnings by management compromise the usefulness of the P/E ratio?
- What are the purpose, definition and derivation of "normalised" earnings?

- Should one calculate the P/E ratio using normalised earnings and if so, how should one interpret the normalised P/E ratio?

Barker states that certain issues have to be investigated before the P/E can be used as a valuation model in the unlisted sector.

P/E ratio as a valuation model in the unlisted sector could be used if it could be established that management did not manipulate the company's earnings. Further deductions made from P/E, for example:

- Industry in which it operates as well as current and future competition;
- The size of the undertaking is also a relevant factor - the smaller, the higher the deduction;
- The net asset base plays an important role – the lower, the higher the deduction;
- Debt/equity ratio above 80% should also be weighted and a percentage be deducted from the P/E; and
- The nature of the required skills could also be problematic if buyers have no skills and/or it is difficult to source.

2.10 VALUATION BENCHMARK

After having applied the valuation methodology to the forecasted numbers and having derived a valuation range, it is advisable to check the numbers against the valuations of comparable companies with similar economic characteristics (size, growth rates, profitability, capital intensity and risk). As stated earlier, for unlisted companies, the information is not always readily available.

2.11 SUMMARY

In the review on valuation, it was endeavoured to obtain insight into the valuation procedure and the extent to which the literature agrees on the various aspects. As documented, valuations on companies in the unlisted sector have unique challenges.

The objective was to ascertain that valuations could be made viable/reliable, which can be done as stated. The ensuing approach was to find a starting point of how to approach valuations. The result was that the starting point is the removal of “noise” in the financial statements and the thorough investigation of the market and the sector in which it operates.

Lastly, the conclusion was that the valuations of smaller companies need a different approach than the public sector. The main reason found was the lack of comparable data, which made it difficult to benchmark certain valuations.

Chapter 3

Research methodology and process methods

3.1 INTRODUCTION

From a theoretical perspective, research may prove viability, but from a practical perspective, it may be unachievable. Various practical obstacles, nuances and other factors on ground level should be taken into account in a credible research effort. The practical market research methodologies are an art by itself. On the other hand, the true potential of an understated market research strategy is possible from a theoretical perspective. Either way, the ability to discern the outcome of proposed target research strategies is rare.

3.2 RESEARCH PROCEDURE

The research procedure was firstly, to consult current overseas and local financial, managerial and business journals containing articles on any aspect of company valuations. The research also included books and unpublished reports under the heading 'valuations' and 'unlisted companies'. Then a literature scan of all articles under the heading 'valuation of unlisted companies' was made.

3.3 PROCEDURAL DESIGN

Respondents completed structured questionnaires (Appendix 1) by means of telephone interviews. The five point Likert scale type questions require respondents to indicate a degree of agreement with each series of statements related to the attitude object. The sum of these statements is used to discover an attitude to or perception of the given statements (Nel et al., 1988:262). A sample of 97 questionnaires was drawn amongst the research population (business brokers, bankers, attorneys and auditors involved with valuations of unlisted companies) of which 75 were completed. That is an excellent 77% response rate.

3.3.1 Design of questionnaires

Forty general research questions were posed to respondents, grouped according to the following categories:

1. General (1)
2. Purpose of valuation (1)
3. Ownership characteristics (2)
4. Basic company information (7)
5. Economic and Industry Outlook (3)
6. Sources of information
 - Economic and Industry Data (3)
 - Company Financial Statements (5)
 - Income Approach Data (4)
 - Asset Approach Data (2)
7. Financial Statement Analysis:
 - Financial Statement Adjustments (3)
 - Comparative Financial Statement Analysis (9)
8. Lastly, questions were asked about the pitfalls encountered in valuing a company.

3.3.2 Analysis of data

Analysis usually involves reducing accumulated data to a manageable size, developing summaries, looking for patterns, and applying statistical techniques (Williams et al., 2001:89). The results will be discussed according to the grouping and for the convenience of the reader, questions will be repeated.

3.3.2.1 General

Q.1. A standard valuation model/procedure to value unlisted companies is used by my company?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
1	53%	19%	0	24%	4%

Only 4% of the respondents indicated that they make use of a standard valuation procedure. A total of 53% did not have a standard procedure. This finding supports the need identified, for the development of a valuation procedure for the unlisted sector. (Chapter 2, par.2.3)

3.3.2.2 Purpose of valuation

Q.2. The purpose of the valuation of the business is clearly stated, e.g. Buying/selling; ESOP; Arbitration, Tax; other?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
2	0%	0%	0%	24%	76%

This finding indicates that valuations are for specific purposes. The purpose is an indicator of the valuation method used. A total of 76% of the respondents indicated that the purpose of the valuation is clearly stated and 24% were sure to some degree. (Chapter 2, par. 2.3)

3.3.2.3 Ownership characteristics

Q.3. Do you have a model to estimate the degree of control by one or more shareholders?

Q.4. Do you assess the marketability issues of the company? (Anything which may restrict marketability, e.g. buy/sell other restrictions on transfer, other)?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
3	37%	49%	6%	5%	3%
4	0%	11%	4%	57%	28%

The respondents that have a model to estimate the degree of control are only 3% and 5% have one to some degree while 86% do not have a model to estimate the degree of control.

Only 28% takes the marketability issues into consideration (buy/sell agreements and other restrictions), 57% to some degree and 11% to a lesser degree. Ownership characteristics are vital issues to consider, according to literature studies done. (Chapter 2, par 2.3)

3.3.2.4 Basic company information

Questions regarding basic information were compiled. The importance of basic information can not be emphasised enough because companies, who have been in business for some time, should be viewed from this as a starting point of any valuation, according to literature studies done. (Chapter 2, par.2.4)

The following questions were posed:

Q.5. Do you obtain the history of the company beforehand?

Q.6. Do you get a detailed description of products and/or services of the company?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
5	3%	29%	0%	48%	20%
6	0%	0%	0%	16%	84%

The detailed description of products / services of the company were obtained by 84% of the respondents while the "history gained" question only obtained a 20% "yes" reply.

Q.7. Do you get market information regarding the competitive situation faced by the selling company?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
7	0%	20%	0%	37%	43%

Only 43% answered "yes" which is not satisfactory at all.

Q.8. Do you gain information on management's depth/capabilities/succession issues?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
8	3%	11%	0%	75%	11%

This vital valuation issue, according to a literature study done, obtained only an 11% with 76% who did it to some degree. This is an important issue regarding the sustainability of the company, which influences valuation issues directly.

Q.9 Do you get information regarding the capital structure of the company?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
9	0%	0%	0%	16%	84%

The response is self-explanatory.

Q.10. Do you get information regarding distribution of ownership and other important relationships?

Q.11. Do you have information on past transactions on the ownership of the company (or lack thereof)?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
10	4%	8%	3%	28%	57%
11	7%	16%	1%	56%	20%

Although a 57% response rate was obtained regarding the distribution of ownership, only 20% said they obtain information of past transactions in the ownership of the company.

Basic company information is vital before any valuation could be started, according to the literature study done. This study showed the general lack of obtaining vital information. (Chapter 2, par 2.4)

3.3.2.5 Economic and industry outlook

The economic and industry outlook is of utmost importance. No company would be worth more than its net asset value in a negative economic and industry outlook.

Three questions were posed as important:

Q.12. Do you evaluate the business plan for enough information regarding the economic outlook?

Q.13. Are the factors as stated regarding the industry outlook relevant to this company?

Q.14. Are specific applications regarding the industry outlook to the subject company stated?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
12	0%	29%	0%	51%	20%
13	0%	0%	0%	16%	84%
14	0%	12%	0%	37%	51%

Only 20% of the respondents evaluate the business plan for economic information regarding the economic outlook (Q.12) and 84% to the relevancy regarding the subject

company (Question 13). A total of 51% responded that specific applications regarding the industry outlook were stated. This group of questions give some satisfaction that Economic and Industry outlooks get the necessary attention (Chapter 2, par 2.5).

3.3.2.6 Sources of information

The sources of information were seen as important to the quality of the outcome of the valuation. The following three questions were posed:

Q.15. Do you use general economic data sources? (general economic data sources)

Q.16. Do you use industry economic data sources? (industry-specific economic data sources)

Q.17. Do you use industry data sources? (Sources pertaining to specific industry)

Question No	No	To a lesser degree	Don't know	To some degree	Yes
15	3%	31%	0%	50%	16%
16	0%	0%	0%	15%	85%
17	0%	19%	0%	38%	43%

General economic sources were used by 51% to some degree and only 16% answered "yes". Specific Industry Economic Data sources included 85% of the respondents, which is very positive. Only 16% get the information on average on a "need-to-know" basis. (Questions 15 to 17). Only 3% did not obtain any general economic information.

These responds give an indication regarding the information obtained to compile a valuation (Chapter 2, par.2.5).

3.3.2.7 Company financial statements

It is of the utmost importance to research the outcome of the analysis of financial statements before the data were computed for valuation purposes.

The following questions were posed:

Q.18. Do you analyse the company's historical income statements to obtain detail for reviewing of possible adjustments?

Q.19. Do you analyse the company's historical balance sheets to obtain detail for reviewing of possible adjustments?

Q.20. Do you analyse the company's historical cash flow statements to obtain detail for reviewing of possible adjustments?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
18	0%	12%	0%	24%	64%
19	0%	12%	0%	24%	64%
20	0%	12%	0%	24%	64%

Financial statements pertaining to balance sheets, income statements and cash flow statements were mostly used to the same degree.

Q.21. Do you analyse the company's historical ratios presented to obtain detail?

Q.22. Do you study the status of the statements (e.g. is it audited, reviewed, externally compiled, and internally compiled)?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
21	0%	12%	0%	24%	64%
22	0%	12%	0%	24%	64%

The same responses were found pertaining to the financial ratios and the status of the financial statements. An assumption was drawn that financial data were analysed before non-financial data were computed in valuation procedure (Chapter 2, par.2.6).

3.3.2.8 Income approach data

A group of questions pertaining to the income valuation approach were grouped and posed to the respondents:

Q.23. Do you get adequate data of the sources of the cost of capital (equity and debt if **WACC** is utilised?)

Question No	No	To a lesser degree	Don't know	To some degree	Yes
23	0%	4%	5%	14%	77%

The majority (77%) indicated that adequate data was obtained from the sources of the cost of capital. This is important to draw a general assumption of the quality of WACC.

Q.24. Do you state your source and/or basis for long-term cash flow or earnings growth assumption (to justify the capitalisation rate used)?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
24	0%	0%	0%	21%	79%

To evaluate the sustainability of the future cash flow it is imperative to evaluate the source and/or basis for long-term cash flow or growth earnings, of which 79% indicated that it was being done.

Q.25. Do you also apply a debt-free income approach and justify the debt/equity weighting for **WACC** calculation?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
25	0%	0%	0%	21%	79%

Question 26 obtained the same response – mainly due to the same nature of the questions.

Q.26 Do you investigate who compiles sources of earnings or cash flow projections – stating reasons for adjustments made to projections, etc.?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
26	0%	0%	0%	21%	79%

The nature of questions 25 and 26 was closer to the valuation methodology, which assumes that the income approach to valuation is popular (Chapter 2. par. 2.5.1).

3.3.2.9 Asset approach data

It was seen as important to pose the following two questions, which may lead to net asset value of a company, especially where the company is not seen as a going concern, or was not operative in the near past.

The following questions were posed:

Q.27 Do you state the source of data and/or assumptions provided for assets/liabilities valuation?

Q.28 Do you analyse the source of data/assumptions provided if contingent liabilities are identified and capitalised?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
27	1%	32%	0%	18%	49%
28	0%	0%	0%	16%	84%

The source of data was stated by 49% and 17% to indicate that it was used to some degree. Those who responded that they state the source of data to a lesser degree were 32%. An 84% response rate indicated that analysis is done and the source pertaining to assumptions where contingent liabilities were identified and capitalised (Chapter 2, par. 2.6.2).

3.3.3 Financial statement analysis

3.3.3.1 Financial statement adjustments

Adjustments to unlisted companies' financial statements were deemed very important, due to factors stated earlier regarding legislation in the unlisted sector. The following three questions were grouped and posed:

- Q.29 Do you give an adequate explanation of the adjustments made to the company's financial statements (or an explanation why none were made)?
- Q.30 Do you assess whether the financial adjustments were reasonable?
- Q.31. Are the importance adequately supported?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
29	0%	4%	0%	9%	87%
30	0%	4%	0%	9%	87%
31	0%	4%	0%	9%	87%

An average of 96% responded positively on Questions 29 to 31, regarding explanations of adjustments made to the financial statements. This is an indication that the necessary adjustments were recorded (Chapter 2.par.2.7).

3.3.3.2 Comparative financial statement analysis

The following nine questions were grouped to research the importance placed on financial statements regarding comparison to companies’ own history, and peers in the industry.

- Q.32. Do you compare the company’s financial ratios, income statement and balance sheet over time to identify trends?
- Q.33 Do you compare ratios calculated between the subject company and the peer companies in the same industry?

Question No	No	To a lesser degree	Don’t know	To some degree	Yes
32	0%	4%	3%	13%	80%
33	0%	4%	3%	26%	67%

Trends regarding the company’s own performance that were investigated amounted to a percentage of 80. The degree of comparing to peers in the same industry is not nearly as high, but got a 67% “yes” rating and a 27% “to some degree”.

- Q.34 Have the accounting policies and definitions (LIFO/FIFO, depreciation, amortisation, etc.) of ratios computed been put on a comparable basis between the subject company and the guideline companies and/or industry averages used for comparison?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
34	0%	4%	0%	3%	93%

Most of the accounting policies were compared.

Q.35. Have other financial statement adjustments been made and justified to “normalise” the company’s historical financial performance?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
35	0%	7%	0%	37%	56%

Only 56% indicated with a definite “yes” while 37% stated that they made some degree of other financial statement adjustments to “normalise” historical performance.

Q.36. Do you point out the strengths and weaknesses resulting from the financial analysis?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
36	0%	4%	0%	27%	69%

Strengths and weaknesses received attention in 69% of the cases and 27% to some degree. This is important to all parties involved in the buying and selling of companies, as well as financiers.

Q.37. Do you check the valuation parameters (e.g. discount or capitalisation rates in the income approach, multiples in the market approach) for reasonableness in light of the financial statement analysis strengths and weaknesses?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
37	3%	13%	0%	28%	56%

The result was 56% with a definite “yes” and 28% to some degree. Only 3% indicated that the valuation parameters were not checked.

Q.38 Is the company’s projected income statements presented with adequate detail (nominal, common-sized, trend analysis) and in a form comparable to historical income statements?

Q.39 Are the company’s projected financial ratios in a form comparable to historical ratios?

Q.40 If “Yes” to Question 32 – Are variances explained or justified?

Question No	No	To a lesser degree	Don't know	To some degree	Yes
38	0%	3%	0%	4%	93%
39	0%	7%	0%	10%	83%
40	0%	7%	0%	13%	80%

An average of 76% stated that comparative analyses on the financial statements were done (Questions 32 to 40). Assumptions were made that these responses were an indication of the need for a formal procedure in company valuations (Chapter 2, par.2.4).

3.3.3.3 Recorded pitfalls

The following pitfalls were recorded:

- Failing to obtain adequate background information on the company, the industry and the economic environment in which the company operates.
- Valuing the company solely based on financial statements.

- Using financial statements for only one or two years instead of a five year (or more) period, which would be more representative of a normal business cycle;
- Failing to consider the company's working capital position;
- Ignoring the existence of intangible assets or other off-balance sheet value;
- Failing to include the present value of any net operating loss carry forwards or other tax benefits that might be available;
- Basing a valuation on a single method without considering other methods;
- Using incorrect methods based on the facts and circumstances.
- Failure to consider trading prices of public companies in the same or similar business;
- Using correct capitalisation/discount rates and price earnings ratios;
- Capitalising an earnings base that arbitrarily ignores loss years; and
- Failure to apply a minority interest discount or control premium when appropriate.

3.4 Valuations methods

A second round of questionnaires distributed amongst the same sample (attorneys and auditors involved with valuations of unlisted companies) that took part in the abovementioned survey with the purpose of the establishing which of the valuation methods were used in the unlisted sector.

The sample of the survey is regarded to be an accurate and reliable reflection of valuation methods within the sector in question.

The five valuation methods discussed in detail in chapter 2 of this report include:

1. Earnings Multiple method (Chapter 2, par. 2.9.1)
2. Price Earnings method (Chapter 2, par. 2.9.11)
3. Discounted Cash Flow method (Chapter 2, par. 2.9.6)
4. Intangible/Intellectual Property Valuation method (Chapter 2, par. 2.9.9)
5. Net Asset Value method (Chapter 2, par. 2.9.10)

Telephone surveys were used to ascertain that the respondents understand the contents of the questions, because valuations can be seen as a complex topic and the results of the telephone survey should be the same. The relevant valuation method was explained before the respondent was asked to rate a question. Ratings of the questions: 1 – No; 2 – To a lesser degree; 3 – Don't know; 4 – To some degree; 5 – Yes

3.4.1 Earnings multiple models

Earnings multiple models: The **multiple** or “**capitalisation rate**” is determined by using a % of the comparable Price/Earnings ratio for a comparable public company. In principle, this method uses **earnings multiples** to determine company value. Four different approaches, as indicated below, are mostly used. Please indicate the applicability to your company.

	1	2	3	4	5
1.1 Earnings multiple models are used by this company	0%	21%	0%	71%	8%
1.2 Net profit after tax multiplied with the Price Earnings multiple is mostly used	0%	21%	0%	79%	0%
1.3 Earnings before interest and tax multiplied with Price Earnings multiple are mostly used	71%	21%	0%	8%	0%
1.4 Earnings before interest, tax, depreciation and amortisation multiplied with Price Earnings multiple are mostly used	0%	21%	0%	79%	0%

A total of 8% of the respondents indicated that they use the earnings multiple model, whereas 71% of the respondents indicated that they use it to some degree and 21% to a lesser degree.

The two methods used by respondents under the earnings multiple model were Net

profit after tax and the Earnings before Interest, tax, depreciation and amortisation. Earnings before interest and tax were mostly ignored.

The next method under survey was the Price/Earnings valuation model. The research included the factors considered when deductions were made in this calculation.

3.4.2 Price/ Earnings as a valuation model

The P/E ratio is a valuation model that makes use of data that are readily available and directly relevant. Any other valuation model might produce similar value, but in a less convenient way. Price/Earnings is a formal relationship between the share price of a company and an underlying determinant of that share price. Given an understanding of the assumptions and parameters of the model, the user can go directly from a forecast of earnings to an estimation of the share price.

	1	2	3	4	5
2.1 Price/Earnings as a valuation model is used by this company	8%	21%	0%	71%	0%
2.2 Appropriate deductions are made when calculating the P/E valuation. The following factors are considered:					
2.2.1 Substantial competition / bad economic prospects	8%	0%	92%	0%	0%
2.2.2 Size of undertaking (the smaller the higher percentage)	8%	0%	92%	0%	0%
2.2.3 Asset base consists mainly of current assets	8%	92%	0%	0%	0%
2.2.4 Specialised nature of assets	8%	0%	92%	0%	0%
2.2.5 Geared high	8%	0%	92%	0%	0%
2.2.6 Limited skills (Limited to manager)	8%	0%	71%	21	0%

A total of 71% of the respondents use Price/Earnings as a valuation model. It is interesting to note that in most cases appropriate deductions were not made.

3.4.3 Discounted cash flow model

According to the discounted cash flow approach the value of a company is determined by the present value of expected cash flows, discounted to present value at a composite cost of capital that reflects component cost and costs of capital. This general statement applies, no matter what kind of company is involved, but the ease with which cash flows and discount rates can be estimated, may vary.

	1	2	3	4	5
3.1 Discounted cash flow valuation model is used by this company	0%	0%	0%	0%	100%
3.2 The value of an asset should be viewed as the present value of the expected future cash flows of that asset	0%	0%	0%	0%	100%
3.3 One of the inputs into valuation is the expected growth rate in operating income	0%	0%	0%	0%	100%
3.4 We mainly use Zero growth (FCF/k_s) FCF = free cash flow k_s = cost of capital	0%	29%	0%	71%	0%
3.4 We mainly use Constant growth (FCF/k_s-g) FCF = Free Cash Flow k_s = Cost of capital g = growth	0%	0%	29%	71%	0%
3.6 We mainly use Super Normal growth – calculate $FCF_1/(1+k_s)^1 + FCF_2/(1+k_s)^2 + \dots FCF_t/(1+k_s)^t$	100%	0%	0%	0%	0%
3.7 The cost of capital is a composite cost of financing that reflects the costs of both debt and equity, and the relative weight of each in the financing structure	0%	0%	0%	0%	100%
3.8 The Appropriate Discount Rate can be described as the rate of return at which an investor (shareholder or lender) would be willing to invest in an asset or business, given a perceived level of risk.	0%	0%	0%	0%	100%

All of the respondents indicated that they use the discounted cash flow model. To record the growth rate used, the following information were obtained: zero growth and constant growth are used to some degree, but super normal growth was never used.

3.4.4 Intangible/intellectual property valuation

There are a number of reasons for valuing intangible assets and intellectual property, including purchase price allocation, transfer pricing, collateral for loans, and litigation. Intangible assets/intellectual property can be valued in a number of ways. The most often occurred methods and straightforward to apply are the cost, market, and income approaches.

The **cost approach** (which usually yields the lowest value) focuses on the cost to create the intangible/intellectual property. It does not consider any goodwill. A **market approach** develops investor ratios for comparable companies with similar intangibles and intellectual property. The value is estimated by quantifying the increase in the investor ratios due to intangibles/intellectual property. Projected economic income (the returns beyond competitive profits) is discounted under the **income approach**.

	1	2	3	4	5
4.1 Intangible/intellectual property valuation model is used by this company.	99%	0%	0%	1%	0%
4.2 In the valuation of intangible/intellectual property the cost approach is followed this company.	99%	1%	0%	0%	0%
4.3 In the valuation of intangible/intellectual property the market approach is followed by this company.	99%	0%	0%	1%	0%
4.4 In the valuation of intangible/intellectual property the income approach is followed by this company (Also known as the excess earnings valuation method).	99%	0%	0%	1%	0%

The results of this research indicated that *intangible/intellectual property valuation*

methods were not used in 99% of the cases. Only 1% of the survey respondents used this method and the preference fell upon the market and the income approach.

3.4.5 Net asset value approach

In some situations, a company's worth can be measured as the net value of its underlying assets. This approach consists of the Adjusted Book Value Method and Liquidation Value Method. Both of these methods determine value based on a hypothetical sale of the company's assets rather than focusing on earnings potential. The mentioned methods are generally used if the subject company (1) is an investment or holding type of company with significant tangible assets; (2) has no established earnings history or a volatile earnings history; or (3) is not able to continue as a going concern.

	1	2	3	4	5
5.1 Net asset value approach (NAV) Valuation Model is used by this company	0%	21%	0%	79%	0%
5.2 The NAV is generally used if the subject company is an investment or holding type of company with significant tangible assets.	21%	70%	0%	8%	1%
5.3 The mentioned methods are generally used if the subject company has no established earnings history or a volatile earnings history.	0%	91%	0%	8%	1%
5.4 The mentioned methods are generally used if the subject company is not able to continue as a going concern.	0%	22%	0%	77%	1%
5.5 A key consideration in the adjusted book value method is to recast the current balance sheet data to change it from an accounting basis (book value) to an economic basis (market value).	0%	21%	0%	71%	8%

The respondents that indicated that the Net Asset Value (NAV) approach is used are 79% to some degree. A total of 21% indicated that they use it to a lesser degree. The NAV is used in only 1% of the cases and to some degree in 8% of the cases used if the subject company is a holding type of company with significant tangible assets.

NAV is generally employed when the subject company is no longer able to continue as a going concern in 77% of the cases, to some degree.

The survey on the valuation methods delivered interesting results as mentioned above. The emphasis on the discounted cash flow (DCF) method was overwhelming and not anticipated at all. It seems that the trend to value a company on the hand of the DCF method is on the increase. The Earnings Multiple Method and the Price earnings Method are still popular amongst the population.

3.5 RECOMMENDATIONS ON SURVEY RESULTS

It can be argued that most of the pitfalls could have been prevented if the necessary information were obtained. It is therefore recommended to compile the following checklists:

- Important information needed regarding the business: *Appendix 3*

- Obtain financial information regarding the staff: *Appendix 4*

- Marketing and procurement: *Appendix 5*

- Contracts and agreements: *Appendix 7*

- Learn as much as possible about the business: *Appendix 6*

3.6 NON-FINANCIAL MEASURES

As discussed in chapter 2, non-financial measures have a significant impact on the valuation of companies. The four major financial institutions in South Africa who are using the Moody's Financial Expert System were approached to establish the effect of these subjective measures on companies. According to the survey, 93% of the companies that failed had more than one "negative" rating as described below. According to the financial institutions, a large number of the failures could have been prevented if the issues categorised below was dealt with.

Table 3-1 Management and leadership - factors influencing success or failure

Category	Exceptional	Above Average	Average	Below Average	Inadequate
Leadership				X	X
Structure				X	X
Planning				X	X
Teamwork				X	X
Information Quality				X	X
Succession Planning				X	X
Marketing Skill				X	X
Operations skill				X	X
Financial Skill				X	X
Commitment				X	X
Integrity				X	X

Leadership

Leadership refers to management's ability to keep employees motivated, provide them with constructive evaluation and create a positive work environment. The following were considerations:

- The ability of key managers to develop and maintain a mission for the company;
- The ability of key managers to foster an acceptance of the company's mission among the employees;
- The quality of communication between key managers and employees; and
- The extent of the turnover among those who work for key managers.

Structure

Structure refers to the appropriateness of the present organisational structure, given the size of the company, its market and the business environment in which it operates. The following were considerations:

- Is management's responsibilities clearly defined?
- Are these responsibilities delegated according to the capabilities of those involved?
- Has the company outgrown its organisational structure?
- Is there sufficient delegation of authority?
- Are there adequate sales management, operations management, financial management and general management?

Planning

Planning refers to the effectiveness of management in identifying goals, objectives and strategies to ensure the ability of the business to survive and earn profits in the future.

The following were considerations:

- How does management track its progress and adjust the plan as it seeks to achieve its stated objectives?
- In the past, how well has the company performed in accordance with its own financial plans?

- In the past, how quickly has management recognised structural changes in the company's markets?
- Is management willing to spend time to investigate carefully the implementation of business strategies?
- Assess management's willingness to rely on and actually use external sources of decision support, such as computers and computer-related products?

Teamwork

Teamwork refers to the ability of the members of management to function effectively as a group of individuals. The following were considerations:

- The length of time that members of management have worked together, as well as previous turnover in key management positions;
- The continuity of information flow between the members of the management team;
- The extent to which there is co-operation among management in meeting shared objectives; and
- The adequacy of team input to decision-making and the extent of information sharing.

Information Quality

Information quality refers to the adequacy of information collected and used for management decision-making. The following were considered:

- Is there a formal report system and/or a computerised inquiry system to provide managers with the information they need to make informed decisions?
- Is the information reliable and provided by management in a timely fashion?
- Is the management information system capable of integrating production, marketing, as well as other areas where significant amounts of cash are generated, or spent?
- When problems arise, do information sources identify the problems in a timely manner?

- Does management budget cash, project sales, age debtor payments, determine which products or services are most profitable and prepare variance reports from budgets?

Structure of Management Succession Assessment

Management succession is an assessment of the ability of the business to plan for and develop capable and experienced future management. This assessment considers the preparedness of successors and the foresight and planning shown by current management and the providing of the succession plan.

Succession Plan

Succession plan refers to the degree to which appropriate steps are taken to minimise problems that might be related to the succession plan of current management. Factors such as age and the health conditions of key officers may indicate the importance of a succession plan.

Structure of Management Skill Assessment

Management skill assessment is an assessment of the skills, experience and effectiveness of the management team in the three principal divisions – marketing, operations and financial. This assessment considers the success and previous experience of management in these areas including attitudes, decisiveness and control exhibited by the management team.

Marketing Skill

Marketing skill reflects management's understanding of the demand of its market, how it tailors its product and services to meet those demands and how it promotes the product or service.

Operations Skill

Operations skill refers to management's ability to control the purchasing, production, distribution and labour activities of the business.

Financial Skill

Financial skill refers to the financial expertise of management and the degree of emphasis placed on financial considerations in making business decisions.

Management Character assessment

The management character is the assessment of the reputations, commitment and integrity of the management team. While these are all-important factors, their impact on the overall assessment of management is minimal unless some concern has been noted about the character of management.

Commitment

Commitment refers to the financial and mental involvement of the key managers in the business.

Integrity

Consider the relationship of the key manager with important stakeholders in terms of reliability, openness and willingness to share information and honour obligations.

A second group of non-financial measures worth considering according to the financial institutions is the company standing, marketing and operational factors.

Table 3-2 Company standing – factors influencing success or failure

Company Standing					
Reputation with customers	Unfavourable	Acceptable	Favourable		
Reputation with vendors	Unfavourable	Acceptable	Favourable		
Reputation with employees	Unfavourable	Acceptable	Favourable		
Ownership involvement	Very High	Some	Limited	Inactive	

Table 3-3 Marketing - factors influencing success or failure

Marketing					
Marketing Strength	Weak	Moderate	Strong	Dominant	Don't Know
Customer Loyalty	Very High	High	Average	Low	Very Low
Competitive Edge	Disadvantage	None	Some	Strong	Unchallenged
Market Conditions	Very Good	Good	Average	Below Average	Poor
Threat of Substitutes	Insignificant	Low	Moderate	High	Very High

Table 3-4 Operational - factors influencing success or failure

Customer Quality	Very Good	Good	Average	Below Average	Poor
Debtor Accounting Risk	High	Moderate	Low	Irrelevant	
Customer Concentration	Very High	High	Average	Low	Very Low
Credit Practices	Very Good	Good	Average	Below Average	Poor
Stock Liquidity	High	Moderate	Low	Irrelevant	

Overall Company Standing Marketing and Operational Assessment

The overall company standing assessment is the evaluation of the attributes of the company, which stand apart from the qualitative evaluation management, industry and financial position. The factors that enter into this assessment are concerned with the reputation of the company among its key constituents (customers, employees and suppliers), its history, the involvement of its ownership and its exposure to potential adverse events.

According to the survey, the non-financial information does not only play an integral part in the success/failure of a company, but also have an impact on the valuation of a company.

3.7 SUMMARY

While companies are merely legal creations, each business is a unique mix of management, people, customers, suppliers, competition, industry, regulatory, and numerous other internal and external factors. These elements come together in unique ways to make the company what it has been, what it is today, and what it will become in the future.

The issues are to identify how these elements are present in a specific company and to discern what each element implies about risks, opportunities, and future of the business from the viewpoint of the buyer. The most substantial risks and opportunities facing most businesses usually come down to a handful of critical issues that tend to predominate over the others. The ability to identify these issues depends on the thoroughness of the valuation effort.

This research provides a glimpse into many of the internal and external forces that impacts a company and why they are relevant to value. It is of the utmost importance to

approach the company to be valued in a methodical way to ensure a thorough understanding of the company and the identification of relevant issues and risks.

The key to a sound valuation result is a direct result of the level of inquiry and analysis made by the business appraiser. The valuator must be thorough and cover a wide variety of issues internal and external to the company that increase or decrease its risk, or create future opportunities. Many of the issues covered in this research are really common sense, and provide a basic framework to better understand and identify relevant risks that impact on how a buyer would view a company.

CHAPTER 4

Summary, discussion and conclusion

4.1 SUMMARY

The primary objective of this report was to establish whether valuers use specific valuation procedures.

The secondary objective was to:

- Empirically and theoretically investigate existing valuation models; and to
- Investigate which existing models were used by the unlisted business sector.

The above objectives were accomplished with the discussion of the valuation models in chapter two and the investigation of valuation practices in chapter three. The sample is representative of the population in South Africa. The data collected is reliable, because fully trained people conducted the telephone surveys, making sure that the respondents fully understood the questions.

As a result of the responses, checklists were designed of important information to be obtained before a valuator could actually complete a valuation. This information is documented in Appendix 3 to Appendix 7.

In the second survey, the Discounted Cash Flow model was the predominant method. It was therefore necessary to develop a flow chart to assist in accurately obtaining all information to complete this valuation approach.

4.2 DISCUSSION OF THE DISCOUNTED CASH FLOW MODEL

The Discounted Cash Flow (DCF) model was a key valuation tool. According to the survey, valuers use DCF to determine a company's current value according to its estimated future cash flows. Forecasted free cash flows are discounted to a present

value using the company's weighted average costs of capital. With heightened concerns over the quality of earnings and reliability of standard valuation metrics like P/E ratios, more valuers are turning to free cash flow, which offers a more transparent metric for gauging performance than what earnings does. Developing a DCF model demands a lot more work than simply dividing the share price earnings or sales. But, in return for the effort, valuers get a good picture of the key drivers of share value:

- expected growth in operating earnings;
- capital efficiency;
- balance sheet capital structure;
- cost of equity and debt; and
- expected and duration of growth.

It was also found that it is less likely to be manipulated by aggressive accounting practices.

Although DCF models are powerful, they have some shortcomings. DCF is merely a mechanical valuation tool, which makes it subject to the axiom "*garbage in, garbage out*". Small changes in inputs can result in large changes in the value of a company. Investors must constantly second-guess valuations; the inputs that produce these valuations are always changing and susceptible to error.

The DCF-model introduced in this report is explained by way of a flow chart on page 46 in this report. All the relevant steps to complete the process, are shown on this chart. The value of the unlisted company is thus the present value of the cash flows that it is expected to generate, discounting back at a rate that reflects both the risk in the company and the mix of debt and equity it uses.

4.2.1 Comments on the discounted cash flow model

As stated above, the DCF-model is very helpful to value companies. There are advantages as well as disadvantages, which deserves a brief discussion:

– **Disadvantages**

It may be difficult to:

- a) Decide on the period;
- b) Estimate future profits (estimate sales volume and price increases, cost of sales and operating expenses);
- c) Estimate tax;
- d) Calculate increase in net working capital;
- e) Calculate residual value of the business; and to
- f) Decide on the discount factor.

– **Advantages**

- a) The method takes into account the time value of money;
- b) The exercise forces the buyer or seller or both to thoroughly analyse the business (to go through every aspect with a fine-tooth comb);
- c) The exercise alone convinces both the purchaser and the seller that the resulting value is often different to what each would expect it to be; and
- d) Pratt, author of “Valuing a business” and one of the leading authorities on business valuations in the United States of America says, “The DCF method is the most valid and accurate approach for valuing a business” (2002:124).

4.3 Non-financial measures

- **Checklists:** Before one embarks on the DCF-flow chart, the necessary information about the business needs to be collected. Checklists for obtaining the said information are attached as *Appendix 3 to Appendix 7*.
- **Business risk factors** that indicate risk premium (Table 2-3) can also be used to indicate the category in which the business will fall to obtain the risk premium. This information forms an integral part of the valuation model applied.

4.4 CONCLUSION

Valuation of unlisted companies requires a business valuator who is astute at recognising and accurately quantifying risk from resources that may not be present in similar listed companies, even companies of the same size. While listed companies can be used as comparables where appropriate, important risk differentials need to be reflected in the multiples - also in capitalisation rates that are ultimately used to value the unlisted company.

The valuator must be able to both see the big picture as well as identify the many risks and opportunities facing the unlisted company. This places a supreme importance on the skills, abilities and resourcefulness of the valuator to know how and what to ask.

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APPENDIX 1: QUESTIONNAIRE 1

Kindly complete the questionnaire by indicating its applicability to your situation on a scale 1 to 5

	1 No	2 To a lesser degree	3 Don't know	4 To some degree	5 Yes
General					
1. A standard valuation model/procedure to value unlisted companies is used by my company?					
Purpose of Valuation					
2. The purpose of the valuation of the business is clearly stated: e.g. Buying/selling; ESOP; Arbitration, Tax; other?					
Ownership Characteristics					
3. Do you have a model to estimate the degree of control by one or more shareholders?					
4. Do you assess the marketability issues of the company? (anything which may restrict marketability/sale, e.g. Buy/sell agreement, other restrictions on transfer, other)					
Basic Company Information					
5. Do you obtain the history of the company beforehand?					
6. Do you get a detailed description of Products and/or services of the company?					
7. Do you get market information regarding the competitive situation faced by the selling company?					
8. Do you gain information on the management's depth/capabilities/succession issues?					
9. Do you get information regarding the capital structure of the company?					
10. Do you get information regarding distribution of ownership and other important relationships?					
11. Do you have information on past transactions in the ownership of the company (or lack thereof)?					

Economic and Industry Outlook	1	2	3	4	5
12. Do you evaluate the business plan for enough information regarding the economic Outlook?					
13. Are the factors stated regarding the industry outlook relevant to this company?					
14. Are specific applications regarding the industry outlook to subject company stated?					
Sources of information : Economic and Industry Data					
15. Do you use general economic data sources?					
16. Do you use industry economic data sources?					
17. Do you use industry data sources?					
Sources of information : Company Financial Statements					
18. Do you analyse the company's historical income statements to obtain detail for reviewing of possible adjustments?					
19. Do you analyse the company's historical Balance Sheets to obtain detail for reviewing of possible adjustments?					
20. Do you analyse the company's historical cash flow statements to obtain detail for reviewing of possible adjustments?					
21. Do you analyse the Company's historical ratios presented to obtain detail?					
22. Do you study the status of the statements (e.g. is it audited, reviewed, externally compiled, and internally compiled)?					

	1	2	3	4	5
Sources of information : Income approach data					
23. Do you get adequate data of the sources of the cost of capital (equity and debt if * ¹ WACC is being utilized)?					
24. Do you state your source and/or basis for long term cash flow or earnings growth assumption? (To justify the capitalization rate used?)					
25. Do you also apply a debt-free income approach and justify the debt/equity weighting for *WACC calculation?					
26. Do you analyse who compiles sources of earnings or cash flow projections – stating reasons for adjustments that were made to projections etc.?					
Sources of information : asset approach data					
27. Do you state the source of data and/or assumptions provided for assets/liabilities valuation?					
28. Do you analyse the source of data/assumptions provided if contingent liabilities are identified and capitalized.					
Financial Statement Analysis: financial statement adjustments					
29. Do you give an adequate explanation of what adjustments were made to the company's financial statements (or an explanation why none were made)					
30. Do you assess if the financial adjustments were reasonable relative to the level of value control vs. minority interest?					
31. Are the importance adequately supported?					

* Weighted average cost of capital

Financial Statement Analysis: comparative financial statement analysis	1	2	3	4	5
32. Are the company's financial ratios, income statement and balance sheet compared over time to identify trends?					
33. Do you compare ratios calculated between the subject company and the peer companies in the same industry?					
34. Have the accounting policies and definitions (² LIFO/FIFO, depreciation, amortization, etc.) of ratios computed been put on a comparable basis between the subject company and the guideline companies and/or industry averages used for comparison?					
35. Have other financial statement adjustments been made and justified to "normalize" the company's historical financial performance?					
36. Do you point the strengths and weaknesses resulting from the financial analysis out?					
37. Do you check the valuation parameters (e.g. discount or capitalisation rates in the income approach, multiples in the market approach) for reasonableness in the light of the financial statement analysis strengths and weaknesses?					
38. Are the company's projected income statements presented with adequate detail (nominal, common sized, trend analysis) and in a form comparable to historical income statements?					
39. Are the company's projected financial ratios in a form comparable to historical ratios?					
40. If Yes to Question 32 – Are variances explained or justified? 41.					
Please state any pitfalls with previous valuations?					
Thank you for your time and participation					

² Last in first out / first in first out

Appendix 2 Questionnaire 2

Kindly complete the questionnaire by indicating its applicability to your situation on a scale 1 to 5. **1** indicates **No**; **2** indicates **to a lesser degree**; **3** indicates **don't know**; **4** indicates **to some degree**; **5** indicates **Yes**

<p>1. Earnings Multiple models: The multiple or “capitalization rate” is determined by using a % of the comparable Price/Earnings ratio for a comparable public company. In principle this method use earnings multiples to determine company value. Four different approaches as indicated below are mostly in used. Please indicate the applicability to your company.</p>					
	1	2	3	4	5
1.1	Earnings Multiple Models are used by this company				
1.2	Net profit after tax multiplied with the Price Earnings multiple is mostly used				
1.3	Earnings before interest and tax multiplied with Price Earnings multiple is mostly used				
1.4	Earnings before interest, tax, depreciation and amortisation multiplied with Price Earnings multiple is mostly used				
<p>2. Price/Earnings as a valuation model: The P/E ratio is a valuation model that makes use of data that are readily available and directly relevant. Any other valuation model might produce similar value, but in a less convenient way. Price/Earnings is a formal relationship between the share price of a company and an underlying determinant of that share price. Given an <i>understanding of the assumptions and parameters of the model</i>, the user can go directly from a forecast of earnings to an estimation of the share price.</p>					
2.1	Price/Earnings as a Valuation Model is used by this company				
2.2	Appropriate deductions are made when calculating the P/E valuation. The following factors are considered:				
2.1	Substantial competition / bad economic prospects				
2.2	Size of undertaking (the smaller the higher percentage)				
2.3	Asset base consists mainly of current assets				
2.4	Specialised nature of assets				
2.5	Geared high				
2.6	Limited skills (Limited to manager)				

3	<p>Discounted Cash Flow Valuation Model: According to the discounted cash flow approach the value of a company is determined by the present value of expected cash flows, discounted to present value at a composite cost of capital that reflects component cost and costs of capital. This general statement applies no matter what kind of company is involved, but the ease with which cash flows and discount rates can be estimated may vary.</p>	1	2	3	4	5
3.1	<p>Discounted Cash Flow Valuation Model is used by this company</p>					
3.2	<p>The value of an asset should be viewed as the present value of the expected future cash flows of that asset.</p>					
3.3	<p>One of the inputs into valuation is the expected growth rate in operating income.</p>					
3.4	<p>We mainly use Zero growth (FCF/k_s) $FCF =$ free cash flow $k_s =$ cost of capital</p>					
3.5	<p>We mainly use Constant growth – ($FCF/k_s - g$) $FCF =$ Free Cash Flow $k_s =$ Cost of capital $g =$ growth</p>					
3.6	<p>We mainly use Super Normal growth – calculate $FCF_1/(1+k_s)^1 + FCF_2/(1+k_s)^2 + \dots FCF_t/(1+k_s)^t$</p>					
3.7	<p>The cost of capital is a composite cost of financing that reflects the costs of both debt and equity, and the relative weight of each in the financing structure</p>					
3.8	<p>The Appropriate Discount Rate can be described as the rate of return at which an investor (shareholder or lender) would be willing to invest in an asset or business, given a perceived level of risk.</p>					
4	<p>Intangible/Intellectual Property Valuation There are a number of reasons for valuing intangible assets and intellectual property, including purchase price allocation, transfer pricing, collateral for loans, and litigation. Intangible assets/intellectual property can be valued in a number of ways. The most often occurred methods and straightforward to apply are the cost, market, and income approaches.</p> <p>The cost approach (which usually yields the lowest value) focuses on the cost to create the intangible/intellectual property. It does not consider any goodwill. A market approach develops investor ratios for comparable companies with similar intangibles and intellectual property. The value is estimated by quantifying the increase in the investor ratios due to intangibles/intellectual property. Projected economic income (the returns beyond competitive profits) is discounted under the income approach.</p>					

	1	2	3	4	5
4.1 Intangible/Intellectual Property Valuation Model is used by this company.					
4.2 In valuing Intangible/intellectual Property the cost approach is followed this company.					
4.3 In valuing Intangible/intellectual Property the market approach is followed by this company.					
4.4 In valuing Intangible/intellectual Property the income approach is followed by this company (Also known as the excess earnings valuation method).					
<p>4 Net Asset Value Approach: In some situations, a company's worth can be measured as the net value of its underlying assets. This approach consists of the Adjusted Book Value Method and Liquidation Value Method. Both of these methods determine value based on a hypothetical sale of the company's assets rather than focusing on earnings potential. The mentioned methods are generally used if the subject company (1) is an investment or holding type of company with significant tangible assets; (2) has no established earnings history or a volatile earnings history; or (3) is not able to continue as a going concern.</p>					
5.1 Net Asset Value Approach (NAV) Valuation Model is used by this company					
5.2 The NAV is generally used if the subject company is an investment or holding type of company with significant tangible assets					
5.3 The mentioned methods are generally used if the subject company has no established earnings history or a volatile earnings history.					
5.4 The mentioned methods are generally used if the subject company is not able to continue as a going concern.					
5.5 A key consideration in the adjusted book value method is to recast the current balance sheet data to change it from an accounting basis (book value) to an economic basis (market value).					
Thank you for your participation					

Checklist of important information needed regarding the business

- Statement of objectives of the valuation work (percentage of shares being appraised, valuation date, and purpose of valuation).
- History and background of the company:
 - o Business activity;
 - o Product line;
 - o Marketing;
 - o Customers;
 - o Competition;
 - o Employees;
 - o Capitalization;
 - o Property and equipment;
 - o Environmental and safety issues;
 - o Legal issues;
- Discussion of the economy (national, regional and local).
- Discussion of the industry the company operates in.
- Details of changes in ownership.

Obtain information regarding the staff

- List of key personnel together with detailed Curricula Vitas
- Organisation chart
- Sources of labour;
- Possible cost of retrenchment;
- Details regarding the provident and pension funds, medical aid schemes, deferred compensation schemes and other employee benefit schemes.
- List of fringe benefits;
- List of "personal expenses" paid in respect of staff, owners, shareholders and directors.
- Details of incentive and commission schemes.

Marketing and procurement

- What kind of marketing literature (catalogues, brochures, price lists, adverts) exist;
- List of locations where company operates, size of premises, whether premises are owned or leased;
- Details regarding export markets – list of customers, method and terms of payment, contact people, previous sales, pending orders)
- Sales and gross profit by customer, product and sales person.
- List of customers, location, names of buyers – who customers buy from.
- List of suppliers, contact person, location.
- List of alternative suppliers.
- List of competitors, where located, and the market share.
- Life cycle of business.

Learn as much as possible about the business

- Obtain financial information and supporting documents
 - Up-to-date audited financial statements for the last 5 years;
 - Management statements from last date audited;
 - Copies of income tax returns for the same period;
 - Details of assessed loss;
 - List of plant, equipment, vehicles and furniture and other movables together with depreciation schedules;
 - Detailed list of accounts receivable with age analysis;
 - List of doubtful debts;
 - List of accounts payable and age analysis;
 - List of prepaid expenses;
 - List of accruals;
 - List of raw material;
 - List of work in progress;
 - List of finished goods;
 - Indicate historical cost;
 - Replacement cost;
 - Number of months inventory on hand.
 - List of outstanding back orders from customers;
 - List of outstanding backorders on suppliers;
 - Outstanding quotations submitted to customers;
 - List of item on lease, hire purchase and rental.
 - Schedule of insurances: short- and long term.
 - Budgets for last 5 years – (Projections if budgets are not available)

- Interviewing key personnel including directors
- Interview external parties;
 - Key customers;
 - Key suppliers;
 - Key competitors;
 - Attorney;
 - Auditor;
 - Previous employees.

Contracts and agreements

- Agreements/contracts with suppliers, customers, franchise agreements, royalty agreements, lease agreements (premises, leases, hire purchase) and rental agreements for plant and equipment, vehicles, furniture and fittings, computers, agreements regarding patents, copyrights, trademarks etc.
- Valid offers to purchase business.
- Copies of lease agreements.
- Existing valuation of assets (municipal valuations of property etc.)
- List of patents, copyrights and trademarks,
- Details of contingencies (pending lawsuits, warranties, product liability)
- Articles, memorandum and shareholders agreements if company. If partnership agreement, etc.
- Existing buy/sell agreements, options to purchase shares.
- Restraint of trade agreements.
- Life and condition of assets.