CENTER FOR PRIVATIZATION

DIALOGUE ON

PRIVATIZATION EXPERIENCE

Wednesday, December 10, 1986

VALUATION

OF A STATE-OWNED ENTERPRISE

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MEMORANDUM December 4, 1986

TO: Alexander C. Tomlinson

FROM: Gordon O. F. Johnson

RE: Proposed Guidelines on Valuation

One of the recurring themes in any privatization assignment is the question of how to value an enterprise to be privatized. For the December 10 Privatization Dialogue we are providing four papers on valuation for advance review by the participants: a paper by Joe Borgatti for the Ecuador Mission; a paper specially written for this meeting by Gray Cowan; a paper by Ron Ivey for the Philippine Mission; and excerpts from the Valusoft instruction manual for their computer software for valuation of a closely held business.

This memorandum provides the background on the reasons for selecting valuation as our theme for the first Privatization Dialogue.

INTRODUCTION

Privatization is putting buyers together with sellers.

Our clients are the sellers. For them privatization is a political process which happens to have economic and financial implications. *"You have to remember that we would like to be re-elected"* they tell us.

You can't have sellers, however, without having buyers. For the buyers privatization is an economic/financial decision which happens to have unusual political risk and implications. *"You have to remember that we have other opportunities to invest our time and money and the return on our privatization investment must be at least as good as what we can expect elsewhere"*, is the message of the buyers.

The bottom line for privatization comes, then, at the end of a complex process by which an acceptable buyer and a willing seller can agree on a specific price for the enterprise. This final agreement comes at the end of the privatization process. To serve our clients and avoid spinning our wheels, we must come up with an estimate of a probable selling price as one of the first steps in the privatization process -- a valuation of the enterprise or enterprises to be privatized.

a

It must be a realistic value. It can be a *generously realistic* value rather than a *low-ball* value where anybody could sell at that price, but it must bring the seller into the real world of the marketplace. Getting the seller to accept a realistic valuation is one of the first real tests of the seller's commitment to the privatization process and therefore must come early in the process.

Other reasons for making an early valuation of an enterprise include:

(a) It assists in establishing priorities when there are number of enterprises to be privatized.

(b) It provides guidance as to how much of our resources can be allocated to a privatization program for a specific enterprise.

(c) It provides a base point for negotiations with potential buyers/investors

DEFINITIONS

For purposes of our discussion we need to agree on our terms -- particularly the difference between valuation and selling price:

(a) Market Value: Our best estimate as to what a willing buyer will pay for the business, exclusive of any special concessions or warranties the seller may be willing to make or require in the negotiations either to sweeten the deal for the buyer or to protect against undesirable abuses or actions by the buyer after the sale. (Special concessions or warranties to have a value of their own, but should not be allowed to distort our initial estimate of provable market value.)

(b) Book Value: A small, largely irrelevant signpost on the way to reaching a market value.

(c) Liquidation Value: An appraisal of what the assets would bring at an auction. Useful in valuing a business which is to be closed down, but not relevant to its value as a going business other than setting a possible minimum for the selling price.

(d) Selling Price: This is the final price which will be arrived at after agreeing on all the terms and conditions of the sale. The selling price may differ from the initial valuation depending on what kind of concessions and warranties are agreed to by the seller and the buyer in the terms of sale. Following are some illustrative variables which will impact on the selling price, but not the valuation.

(i) Does the seller want the buyer to take on any prior indebtedness? Employment or pension or any severance obligations to present employees? Any other restrictions on the buyer's freedom to manage the business to optimize its profitability?

(ii) Is the seller prepared to provide suitable legal indemnifications to protect against legal claims, or grant tax holidays or temporary tariff protection or other post-privatization assistance? What about political risk insurance against possible re-nationalization?

(iii) Is the seller prepared to grant deferred payment terms with special interest notes for certain classes of buyers?

VALUATION

OF A STATE-OWNED ENTERPRISE

BACKGROUND READING MATERIALS

1. *Talk at the National Financial Corporation, Quito/Ecuador by Joseph J. Borgatti*

2. *Company Valuation as an Element in Privatization Strategy by L. Gray Cowan*

3. *Financial Valuation of a Business Enterprise by Ronald Ivey*

4. *"Expert Witness" Software by VALUSOFT*

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TALK AT THE NATIONAL FINANCIAL CORPORATION

IN QUITO/ECUADOR

BY

Joseph J. Borgatti

TALK GIVEN ON SEPTEMBER 5, 1986, IN QUITO, ECUADOR, AT CORPORACION FINANCIERA NACIONAL (CFN), TO MEMBERS OF THE DEPARTAMIENTO DE EMPRESAS Y REHABILITACION, RESPONSIBLE FOR MONITORING, REHABILITATING, MARKETING CFN'S EQUITY INVESTMENT PORFOLIO).

Ladies and Gentlemen:

I have been asked to talk with you about valuation for the purpose of setting sales prices on shares of private sector companies.

INTRODUCTION

I understand that CFN is about to embark on a program to divest of its holdings in commercial companies and properties. The point of departure is the setting of appropriate prices for these holdings. One can anticipate that if the price is set too low it may attract the wrong kind of interest and risk criticism that the State's (and hence the public's) patrimony was sold too cheap. If priced too high, it may discourage the serious investor and may cause a no-sale on the initial offering. If it is then re-priced, the risk is that the market may simply sit back and wait for further lowering of price.

This conference will discuss some of the key issues in valuation.

At the outset, it is well to point out that valuing is very important for setting the sales price. But it is also an important first step that provides information for a range of other important decisions concerning the timing of a sale, the market to seek, as well as such questions as whether and how to prepare the company for sale.

CREDENTIALS

My credentials consist of several years working as a commercial banker in Latin America followed by 5 years as Chief Executive Officer of an investment company operating in Latin America in the same field as CFN. In fact, that company and CFN held many of the same investments in Ecuador. During my years with the company, many of its investments in Latin America were put on the market and sold. More recently, I have been engaged in helping the Government of Honduras, through the Center for Privatization of Washington DC, under contract with AID, to study and develop a plan for privatizing almost 70 state-owned entities in that country.

PREMISE

The basic premise of valuation is that value is transactional; i.e. it arises out of a transaction. The value of a private business asset, whether shares in a company, a piece of equipment, land or a building, is what it is actually sold for in the market. Until then, the value is strictly someone's estimate of the price it might fetch sometime in the future.

In valuing an asset for sale, what we are doing is simulating the market environment in order to get as close as practicable to what the market is likely to pay for the item.

The key consideration is to put ourselves in the place of the buyer and ask how much we can expect to earn from the asset. Forecasting future earnings really is the heart of the process. We then calculate the present worth of this future stream of income and relate that to how much risk is involved and how much we could earn in alternate investments of similar or lesser risk.

THEORY OF VALUATION

Most people would agree with the theory of valuation which states that the value of a business is in direct relation to the future benefits it will accrue. They may have differing ways of how to calcuate the benefits, i.e. of translating the theory into practice. But the generally accepted theory, stated more technically, is that the value of a business depends on the future benefits that will accrue, discounted back to a present value at some appropriate rate.

This talk will discuss some of the ways to estimate future benefits, with specific relevance to the Ecuadorean environment. Also, we will have in mind CFN's desire to have a procedure which provides reasonable assurance that it is setting the right price for the shares that it intends to divest. Also -the point must be repeated- valuation is only part of the divestiture process, an important one and the starting point, but only part. There is an equally important part which is to find the right buyer and offer the right terms and conditions to conclude the sale. This talk cannot

treat it in detail, but it is important to mention it, in the Ecuadorean setting. To make a successful divestiture of CFN's portfolio, in the Ecuadorean market, it may be necessary to do more than correctly calculate a selling price.

GOALS OF VALUATION

The general goal of valuation should be to achieve a businessman's valuation -that is, what a businessman thinks it is worth to him, for it is a businessman who is going to buy it. I believe that this kind of valuation is what is called "fair market value", the amount for which an asset would likely be sold by a knowledgeable seller who is willing but not obligated to sell to a knowledgeable buyer who is willing but not obligated to buy.

Such an approach should establish high and low parameters and avoid two mistaken approaches: One, the use of book value (to recover the Government's investment in troubled companies) which would only drive buyers away, and the other -the fire sale approach- to get rid of the asset once and for all, which would inspire the wrong kind of interest and earn criticism harmful to the whole process. Buyer and seller are much more likely to agree on a sales price that is developed in a rational, open way. Price, then, may not be the big issue. More likely, it will be the terms offered.

CFN'S GOALS

The approach which I have just described should be consistent with CFN's goals. In reaching a valuation and in negotiating a sale, CFN, because it is disposing of National patrimony, must be concerned with

the way the valuation is produced and the means by which a sale is effected. Otherwise, if the transaction is not sanctioned by public opinion, the whole privatization process could be harmed. Moreover, it must be concerned with who the eventual purchaser is, at least in the case of the large troubled firms. For, the whole point of privatization is to get such firms into the hands of those who can restore them to economic efficiency.

THEORY AND PRACTICE OF VALUATION

There are no formulas, mathematical equations or models to use which will automatically produce the right price. You can use a computer to help you perform a rational, logical sequence of steps to reach a working estimate. In fact, a computer program can be very useful, as we will see. But there is nothing precise about setting values. It is a series of judgements, and highly subjective. Moreover, one simply cannot come up with the right price which guarantees the right sale. This is not to say that there are not formula approaches to setting the price; and occasionally they can be helpful. Service businesses such as insurance agencies and travel agencies are examples. They are susceptible to formulas because their gross margins are usually fixed and known. Once the buyer plugs in the sales volume he more or less knows what will be available to cover his costs and can make a calculation of the potential profitability of the business for him.

The common formula approaches are based on the balance sheet, the income statement or both. For example, there is:

ADJUSTED BOOK VALUE -This is more useful when the company has a high proportion of its assets in current assets.

CAPITALIZATION OF EARNINGS - this is useful when the company has a steady earnings stream, but it has to be adjusted to eliminate extraordinary items.

PERCENT OF GROSS REVENUES -the idea is that, especially in service businesses, as we have seen, a certain amount of gross revenue ought to be able to produce a certain amount of net profit.

The problem with formula approaches in general, it is said, is that the result usually turns out to be unfair to one party or the other. The valuation process should reflect a complex set of factors usually too complex to be embodied adequately in a formula. A formula might produce an appropriate value in one year, it might not do so in another.

Again, stated briefly, the value of a business depends on the future benefits that will accrue, discounted back to a present value at some appropriate rate.

The starting point is the appraisal of physical assets. The appraisal must document precisely what is possessed and legally owned, its function, location and value. This must be done either on a going-concern basis or a liquidation basis. Moreover, if it is a fixed asset, a determination has to be made as to what is its highest and best use and a value assigned correspondingly. A major problem in valuing assets is obtaining current information on replacement cost. You are well aware of this.

There are three basic approaches to valuation. Actually they all depend in one way or another on a market price. And they are performed in order to arrive at the fair market value.

MARKET APPROACH

INCOME APPROACH

COST APPROACH

Which approach to use depends on what is being appraised, as this chart shows:

ITEM APPRAISED		APPROACH SELECTED
LAND		MARKET
IMPROVED PROPERTY	)	INCOME *
	)	COST/MARKET
MACHINERY & EQUIPMENT		COST
GOING CONCERN		INCOME

* when, for example, it is a building containing income producing offices or apartments.

When applicable, the market approach is considered preferable in most appraisals since it reflects the informed judgement of those active in the marketplace However, one has to consider each approach to appraisal and finally select a single valuation for the business as a whole based on his judgement, rather than make an average of the values derived. Wall Street uses average values on occasion, as we shall see, but in a very limited specialized way. They are averages of values that are all calculated in the same way.

MARKET APPROACH

In the market approach, you compare the sales prices of similar companies or similar assets, or the asking prices for some that are for sale at the time. Since no two are the same, the appraiser has to

make adjustments for the differences; -for example, differences in physical characteristics, terms and conditions of sale, location, etc..

COST APPROACH

This approach uses the replacement or reproduction cost as an indicator of fair market value. It is based on the idea that an investor would pay no more than what it would cost him to replace or reproduce the item. In fact, that would be the highest amount he would pay. If the item being sold would not provide all the utility as the new one, then its price would be lowered to adjust for deterioration -wear and tear- and obsolescence.

INCOME APPROACH

This approach calculates the present value of future cash streams which will be produced over the life of the item. First you have to make a projection of the cash flows which can be expected to be generated. You have to estimate future incomes and expenses. Then you have to convert these cash flows to a present value equivalent which accounts for the time value of money. The fair market value is the sum of the discounted cash flows and the discounted residual value at the last year of the cash flows generated. The discount factor is adjusted to reflect risks in attainment of future income streams.

The valuation of the future earnings potential of a going concern is not an exact science. Considering the same relevant factors, experts may differ widely in their valuations based on potential earnings; there are so many factors involved, and the weights assigned to each is a matter of judgement. The factors include not

only the business itself, and people, but economic conditions, competition, government actions, etc.. The key point, in my opinion, is to put more weight on future projections than on historical results.

BOOK VALUE

Book Value is useful because it provides a basis for arriving at a rate of return. By itself it does not tell you what the market may be willing to pay for the shares. But, to the extent that revaluations of assets are performed regularly, in accordance with Ecuador's rate of inflation, it can be a rough benchmark of current market value.

The NOMINAL value per share is similar to the par value concept used in other markets. It shows the value assigned to the shares when originally issued and, as such, shows the original cost per share. Here in Ecuador, there appears to be more attention paid to this figure than might be wished.

YOUR METHOD OF VALUATION

I was pleased to collaborate in a reformulation of your pricing methodology. As it is now configured, it takes into account the important factors that bear on values in Ecuador today, yet stays within the basic principles of valuation. The key factors of your methodology, as I see them, are:

NET WORTH - By adjusting assets and liabilities to current worth you remove from the balance sheet assets which are not needed to produce the expected stream of earnings. You also adjust for other known changes in the status of both assets and liabilities, and you revalue assets in accordance with current value. You also establish a residual value for the assets at the end of the holding period when

an investor presumably might sell his holdings. Considering Ecuador's inflation and devaluation of approximately 18-20% and 13-15% per year respectively and the fact that the Ecuadorean investor looks for "total return", and thus purchases not only for earnings but for appreciation as well, this seems to be a procedure which "fits" the circumstances.

As to the problem of obtaining current information on the cost of imported machinery and equipment, I believe that it is not simply a question of having access to price lists and estimates of inflation rates. With all due respect for your considerable abilities in valuating, I would nevertheless encourage you to retain independent appraisers for the complex and important cases. This is an expensive and often time consuming process, but worth it because you get the benefit of professional training, experience and third party objectivity. Moreover, these appraisers bring with them an encyclopedic knowledge of current replacement costs.

FUTURE EARNINGS - You analyze historical earnings as a point of departure for estimating future earnings, but make an independent estimate of future earnings based on consultation with the management of the company involved. And you place it in the perspective of the general business environment. Your decision to limit earnings estimates to five years seems about right for the changing Ecuadorean scene.

I would comment that since both the estimate of future earnings and the estimate of future residual value is based on valuing future events, your analysts will want to come up with a range of reasonable values for each company. I would suggest three ranges: pessimistic, optimistic, and a mid range, which we might call "most likely".

OPPORTUNITY COST - The fact that an investor can earn 30% on his money with normal risk and liquidity, makes it appropriate that this figure be used in discounting future earnings back to the present.

A GENERAL COMMENT ON YOUR VALUATIONS APPROACH

While I support your idea to have a single approach for all companies, it may prove in practice that you have to alter your approach in some cases to weigh more heavily the valuation of patrimony (assets less liabilities) and in other cases weigh more heavily the estimate of earnings. My reasoning is that in cases where the asset base is negligible, compared with earnings, as in the case of a service business, you would want a capitalization of earnings approach, and in cases where there are heavy assets and the earnings are negligible, you would want an asset value approach. However, all in all, I believe that your method is suited to your particular environment, but the test will come in the market place.

I would really want to end this comment on your valuation method by emphasizing that formula or method is not as important as the care and judgement in obtaining the figures to put in it.

OTHER METHODS AND PROGRAMS

VALUE SOFT PROGRAM

As an alternative method, which you can use to test your own method, I have given you a copy of a computer-aided valuation method, "Expert Witness" by Valusoft. The kit includes an instruction manual and a diskette which you can use on your computer. Also, you will note that it contains samples of actual valuations.

There are additional examples in the book which I have left with you which also contains much basic material pertinent to your

activities. The book, of course, is "Valuing A Business", by Shannon Pratt, published in 1981 by Dow Jones-Irwin. This is a widely acclaimed text on the analysis and valuation of closely held companies.

I have discussed with you, during my visit, some techniques and rules of thumb used elsewhere. One example is the rule of thumb that a share in a cement company ought to be worth the value of annual sales divided by the number of share outstanding. These are useful as benchmarks against which to check your own calculations. I would suggest that you make a collection of such guides, for they tend to be universally applicable in a broad sort of way. Another technique which I have described to you is a method used in the U.S. for leveraged buyouts where comparisons are made with the prices per share at which other companies (especially those in the same business) have been sold recently. The U.S. and Ecuadorean markets obviously differ, but the techniques which may be transferrable are those which calculate, on a per share basis, average book value, earnings, sales and cash flow; assign multiples to them based on market transactions or rules of thumb for the industry; and then derive a range of prices per share from which to calculate an average. I have left with you material describing this technique.

But the point that I wish to underscore is that the best approach, whenever possible, is the market approach because it reflects informed judgement practiced by those who are in the market. The use of more than one approach is valid -with the caveat, however, that the object is to come up with one price.

GOODWILL

Before finishing, I would like to respond to the question that some of you have asked me about how to estimate the value of good will or other intangibles. My comment is that they are reflected in the results of the bsiness. Sometimes, as in the case of a franchise, like McDonald's or Hertz in the U.S., there is a market price for the franchise which can fairly easily be obtained and plugged into your calculations. But for most, if they have value, they have already provided it in the form of higher earnings and need not be calculated again.

CONCLUSIONS

In conclusion, let me say that I am impressed with your knowledge of the companies that you monitor, and with your understanding of valuation techniques. It is refreshing, too, that several of you continue to seek more information. I would encourage you to seek as much information as you can, especially about commercial transactions of any type taking place in your market because they give you a feel for the current value of things. Your market does not have a broad base of transactions, but transactions are occuring, and whether trading in real estate or debt instruments, they do have a relation to your transactions.

I sympathize with your problems of getting information from abroad and have suggested to A.I.D. how they might help you in this regard. I also suggest that you establish contact with the Commercial Attache at the U.S. Embassy so that he can channel to you information on price trends.

If I could leave you with one message it would be this: There is no business decision bigger than deciding the price at which a company is sold. Few expenditures are more worthwhile than those necessary to get it valued properly. It costs money to have appraisals done. It is hard work, as you well know. Outside consultants may be needed because the know-how to do it properly is not readily available. But, with a properly selected outsider what you get, as I have said, is the benefit of professional training, experience, third party objectivity and a knowledge of values.

I should mention that I do not expect that you will find it easy to sell your share holdings to the public. Most companies think that it will be much easier to sell stock to the public than actually turns out to be the case. My advice is not to be daunted but to learn from your difficulties and try to work more and more closely with brokers, banks, investment companies and other intermediaries who can put you in touch with investors. The intermediaries should also be valuable in advising how to select companies for sale, prepare them for the sale, and even package groups of them.

As a parting thought, I must say that you have a good, basic methodology. Use it, refine it, check it. And keep your focus on the buyer. He is the one you need to complete the transaction.

I thank you sincerely for the fine reception that you have given me. It has been a pleasure working with you, and I enjoyed the feeling of being part of your group. If I can be of help to you in the future, I am at your service.

Joseph J. Borgatti September 30, 1986

COMPANY VALUATION AS AN ELEMENT IN

PRIVATIZATION STRATEGY

BY

Valuation of the industries or services which are candidates for privatization is at the same time one of the most necessary but also one of the most difficult aspects of privatization. The difficulty arises from the fact that there are normally at least two contending parties, the owner of the state owned enterprise, the government on one side and the potential buyer on the other. Each usually has a diametrically opposed objective; the owner wants to realize as much from the property as possible--at the very least, the past investment (and hopefully a profit) while the buyer seeks to acquire the property as cheaply as possible. Indeed, one of the pitfalls of a privatization program is that buyers tend to regard the privatization of a firm by government as a forced divestment and will tend to base their offers on fire-sale rates.

Valuation becomes not only a technical question of judging the real market value of the property concerned but a matter of substantial political sensitivity as well. No government can afford to be exposed to the accusation that it is selling off the national goods cheaply to selected domestic entrepreneurs or to rapacious foreign investors (especially multi-nationals) who will seek to exploit the opportunity presented by divestment. The property being sold may have been losing money for a long

period, may have required high continuing subsidization to remain in business or have been badly mismanaged; nevertheless the government will have to justify to its political opponents any decision to sell which involves writing down its investment (unless it can be done by capitalization of debt). This is more particularly true if the sale offers the prospect that any new owner's first concern will probably be to reduce the numbers employed by the firm to lower production costs and promote efficiency.

In the final analysis, an acceptable valuation must arrive at a compromise between these two conflicting objectives. Only rarely will the owner be persuaded that the sale price should correspond to the objective market value of the property. However the value figure is arrived at, it is important that it be suggested by an agency which is disinterested (and must publicly be seen to be) rather than by a group, however distanced from government, that could be interpreted as gaining from the sale.

No satisfactory valuation of a firm to be privatized can be arrived at without close examination of factors extraneous to the immediate circumstances of the sale.

-- The macro-economic environment in which the firm has operated is of major importance. The firm may have been unable to break even or make a profit because of factors not under management control, such as government pricing policies, access to foreign exchange or labor code regulations.

-- Social overhead objectives incompatible with effective business practice may have been imposed on the business. If so, an effort should be made to estimate their cost in order to give an accurate picture of the firm's potential if it were able to operate without such costs.

-- The structure of government control over the firm may have played an important part in its operational inefficiencies. Has official oversight been so rigid as to prevent independent management decisions or, on the other hand, has it been so lax that management was unable to determine precisely what the government's real objectives for the firm were?

-- SOEs that have been operated as closely as possible to a private business model prove to be the easiest both to evaluate and to sell.

Any evaluation has to take into account the internal politics of the country concerned in an attempt to answer the question, just what is the government's political stake in the firm being divested? What is the strength of the opposition and where does it come from--inside the government as well as from outside interest groups? Has the firm being sold been an important part of the government's past pronouncements on industrialization or indigenization? If so, it may be necessary to mount a public education campaign to create awareness of the reasons for a change in official policy. Success in public acceptance of the sale could raise the value of the property.

It is usually advantageous to look as carefully as possible at the overall objective in privatizing as an indirect indication of the government's view of the worth of the firm. If the government sees privatization primarily as a source of revenue, arriving at an agreed sale price will be more difficult. If on the other hand, the government views privatization of SOEs as a way of reducing expenditure, or as a means of distributing wealth through stock floatations, thereby encouraging the growth of private sector capability, the selling price may be somewhat more flexible.

Some governments have recently been considering debt-equity swapping (or capitalization of debt) as a means of attracting

foreign investment or return of flight capital to increase industrial investment; use of this device could promote the sale of SOE's at what amounts to bargain investment rates. The legal framework in which the firm to be divested has been initially created may in certain cases become a critical element in its valuation.

-- In Thailand, for example, there are several separate legal frameworks within which SOEs have been brought into being; divestment of a company may require a mere stroke of the minister's pen, a decision by the cabinet, a royal decree or legislative action. The value of the firm may be diminished if it appears that lengthy and complicated actions by different arms of government may be needed before the firm can be legally passed to new owners.

-- This may be one factor in the choice of firms to be privatized; firms whose ownership may be a matter of simple transfer by authority of a single ministry (as is the case of many SOEs in the Ivory Coast) will be more readily saleable.

-- Is the government prepared to pass legislation to enable a privatization program to go forward expeditiously (as was the case in Honduras where an enabling resolution preceded serious discussion of sale)?

Attention has to be paid to company law and the commercial and labor codes of the country. They may create complications in the sale which will effectively lower the value of the firm.

-- In Latin America, for example, a firm acquires a legal personality which continues to exist, even if it has ceased business operations, by which shareholders enjoy certain residual rights until the firm is declared, often by lengthy court action, to be no longer "alive".

-- Labor codes provide for pension and dismissal rights for workers that impose so onerous a burden on the firm as to make it virtually impossible to find a buyer if the cost of liquidating them is not borne by the government before the sale. It may prove to be necessary to liquidate the firm, sell the assets and reestablish the business in order to start afresh without the encumbrance of pension and employment rights.

-- In one Latin American country, Peru, a somewhat complicated and costly system of providing for early retirement payments to discharge legal labor obligations has been successfully applied and a similar system is being examined for one Central American country.

The value of a firm may also be directly affected by tax legislation applying to private companies, in contradistinction to those owned by the state, particularly in the areas of property or income taxes; these are a factor in forecasting future profit levels. The possibility of restriction of the business by government regulation must also be considered in those cases where the firm is engaged in producing goods or services which are of general public need or may be of potential national security concern.

-- So-called "natural monopolies" such as electric generating and distributing companies may prove to be unsalable regardless of their value because of fear that regulation will restrict return on capital investment.

Finally, the rather murky area of general forecasting of future world economic trends plays at least some role in valuation if the product is being produced for the foreign market and not as part of an import substitution program. For domestic firms, the possibility of increased local consumption, if a higher quality product is envisaged by the buyer may also figure in the calculation of value.

II

This paper cannot attempt to deal in detail with the complexities involved in the technical financial analysis of an individual firm necessary to arrive at an evaluation of its real worth. In broad outline, however, they should take into account:

-- The historical evolution of the firm from its establishment by the state to the present need for divestment. What prompted the government to create it--ideological conviction that state control was preferable, a need that was not being fulfilled in any other way or a business opportunity from which profit could be made? In most cases, it is likely that it was a combination of all three as well as other considerations.

-- In many instances in LDCs, little or no market research was done prior to setting up the firm nor have market changes, foreign or domestic, been followed which might have required changes in the firm's product.

-- The motive may have originally been the desire to bring in modern technology to the developing industrial sector. As the firm failed to prosper, it may have been unable to keep up with technological improvements in production so

that it may have lost any competitive advantage it originally had. Plant and equipment may be aged and worn so that substantial capital for modernization may be necessary on the part of a buyer.

In all cases estimates of future cash flows will be required based on a number of different scenarios.

-- Depending on the product produced, studies of potential export markets, raw material sources and the possibilities of producing new products for additional markets not previously explored by the firm will play a role in valuation.

-- If the firm has been heavily subsidized in past, the prospects for profitability under unsubsidized operating conditions will have to be estimated. If the firm has been producing for the domestic market, what are the prospects that this market can be increased, either by improving distribution or by introduction of new products?

-- SOE's have not been well known for their response to consumer preferences; indeed some LDC firms have failed to reach profitability because consumers simply preferred to

buy imported products of better quality or greater variety when they were available. Part of the valuation of the firm may rest on estimates of future possibilities inherent in new product lines not past production records.

Obviously, a critical part of the valuation process is the financial analysis of the firm's present condition.

-- Full financial records are the exception rather than the rule for LDC enterprises. It may be necessary to reconstruct a financial history of the firm from such records as can be found, often a lengthy and time-consuming process that will not always produce satisfactory results. Important changes in assets, income and costs over a given period may reveal hidden financial weaknesses as will changes in liquidity and cash flow. Long and short term debt, hidden liabilities as well as hidden assets (such as trade names) have to be identified.

-- Any serious potential buyer will want financial information on the firm that meets international business standards so as to be able to compare the company's performance with that of the industry as a whole.

-- If the price structure for the product has been subject to government regulation, is government prepared to allow market forces to set prices if the firm is privatized?

-- Foreign investors will require precise information on official restrictions on repatriation of profits and capital investment. If it is likely that repatriation will be subject to a limited percentage annually, (as in the case of investment derived from capitalization of debt in Chile), this will have to be factored into a buyer's estimate of the firm's value.

Apart from the purely financial aspect, an important part of valuating the firm rests on an estimate of the past and present capabilities of management.

-- A buyer will need to know how the managers have dealt with budgeting, planning and personnel issues and whether they have engaged in any serious studies of costing. How well trained are the managers in modern business practice? In many cases, managers of SOEs have in past been seconded civil servants not necessarily attuned to the profit motive. Increasing numbers of younger managers have had contemporary training but they may not have been able to put it the best use if they have been responsible to a

board composed of political appointees who have little knowledge of (or interest in) the business or to ministry representatives who regard board membership as a perquisite of office. No manager, no matter how efficient, can function effectively in a situation where he lacks autonomy of decision.

-- If a potential buyer feels it necessary to replace the entire management structure, this may entail undue delay, stemming from local opposition, preventing quick resumption of production.

These are only a few of the myriad considerations that go into the technical aspects of arriving at a fair valuation of a firm but they become part of an estimate of the overall impact of privatizing an SOE.

III

Cases arise in which the government may feel that for political reasons full privatization may not be attainable regardless of its desirability. Several alternatives are available, each of which figures at least in some degree in the valuation of the company.

-- The government may decide to sell a controlling interest in the firm or to retain a majority share, in either case with the help of a private joint venture partner, who may be looked to for management skills, foreign market access and/or capital investment. Any potential joint equity partner will require information on the financial situation of the firm, and its past record to arrive at his estimate of the prospects for future development.

-- Short of a joint venture, the government may decide to retain full ownership but to contract out overall policy direction and day-to-day operation of the firm to a management contractor. If the contractor takes equity in the firm as part of the contract, valuation of the firm will be a prerequisite. By contracting, the government avoids the accusation of surrendering ownership of a state enterprise to a private buyer although it does lose operational control. But this may be the only feasible way of putting the firm on a basis that will not require further subsidization.

-- A variation on this alternative involves leasing of the SOE to a foreign company or a competing local company. In some situations local privately owned companies have been established which, because of more efficient management,

have been able to compete successfully with the state owned firm without subsidization. A case in point is the iron foundry in Mogadiscio, Somalia. The government did not see its way clear to divestment and, after a thorough business analysis, the consultant's recommendation was that the failing SOE be rescued by permitting a Somali owned and operated competing foundry to lease the property, making use of such working equipment as the state's firm possessed and integrating its production into that of the ongoing successful enterprise. It was also suggested that the range of products theoretically offered by the state foundry (many of which it could not, in fact, manufacture) be reduced to those which could be efficiently produced to meet local market demand.

Leasing, as a technique for operating SOEs has, of course, been well known in the hotel field in many LDCs. In most cases an international hotel corporation takes over full control of the management of the property but only after complete valuation of the possibilities for profitability. The leasing corporation provides its own special services, such as use of an international reservation system as well as direct management. Such an arrangement involves either a specific leasing fee to the owner or a profit-sharing arrangement. In either case, the government is committed to a hands-off position on all management decisions.

FINANCIAL VALUATION OF A BUSINESS ENTERPRISE

BY

Ronald J. Ivey

FINANCIAL VALUATION OF A BUSINESS ENTERPRISE

The typical motivation of a buyer in purchasing any property, whether tangible or intangible, is the expectation of benefits of ownership subsequent to the purchase. From a theoretical point of view, the value of property is equal to the present value of all benefits of ownership subsequent to the purchase.

In the case of a business enterprise, the benefits of ownership are quantifiable as cash income. This makes a business particularly well-suited for valuation based upon the value of anticipated income (the income approach). On the other hand, there is a limitation in using the technique described below when the enterprise in question has not yet gone into operation.

In valuing a business, useful historical information is gained from financial statements. The typical financial statement consists of a balance sheet and an income statement (also known as profit and loss statement). The balance sheet shows account balances for assets, liabilities, and equity as of the date of the balance sheet. The "book" value of the assets or equity of a business are obtainable directly from the balance sheet. However, "book" values can be very misleading when considering the market value of a business.

Balance sheet data generally reflect historic costs, and adjustments based upon arbitrary accounting procedures, neither of which accurately represent market values. For example, a building may be constructed for business use,

with an estimated useful life of 20 years. If it is assumed that the building has no salvage value at the end of the useful life, accounting data would normally show the book value to be the original cost less 5% for each year the building has been in service. However, it is commonly known that the market value of a building often increases over time, both as a function of inflation and of increased demand.

In estimating market value, it is necessary to consider the dynamic nature of the market. Markets behave in unpredictable ways that make the rigidly objective nature of accounting procedures incapable of representing market values on the balance sheet.

The income statement (profit and loss statement) provides the more useful data in the valuation of a business enterprise. There are two reasons that the income statement is the more relevant financial report:

> The value of an operating business arises from the ability to generate income, and not from the historical accumulations of assets
>
> Income statement data are substantially derived from the reporting period (e.g. month, quarter, year so there is considerably less economic distortion of the data than in the balance sheet, which represents a cumulation of data over many accounting periods.

The first and more important reason for reliance upon the income statement for valuation is the theory upon which the market values business. Since an investor in a business is motivated by the expectation of receiving future benefits (income), he/she is indifferent to any historical events of the business, except for the degree that historical data

impact future earnings. Historical income statements are often good indicators of future revenues and expenses, which are used to quantify the value of expected income.

The true motivation of the investors in a business is not the anticipation of accounting income, but rather the anticipation of cash flow. In this context, cash flow is the amount of cash that would be available for distribution to the owner(s) after all payments necessary for prudent operation of the business have been made. Cash flow can, in some cases, differ substantially from accounting income. The most common sources of differences between cash flow and income are different treatments of depreciation, capital expenditure, loan amortization, and changes in working capital.

Depreciation is a non-cash expense, used in accounting to reflect an anticipated cost of the use of plant and equipment. In analyzing cash flow, depreciation is only useful in the calculation of taxable income and income tax.

Capital expenditures are uses of cash that are not considered in the period of expenditure. Instead, the price of capital purchases appears over a number of accounting periods as depreciation.

Loan amortization is a use of cash that is not considered an accounting expense (although interest payments on loans are expense items). The accounting treatment of amortization is the reduction of a liability (loan) by an offsetting reduction of an asset (cash).

Changes in working capital also represent a use/source of cash that is not reflected as an expense in accounting statements. Working capital includes such items as cash, inventory, and receivables. Net working capital is the

source of these current assets, net of current liabilities, such as short-term loans and trade credit. Most businesses require a positive net working capital which must increase with increasing business. As a result, a growing business will use cash to increase net working capital, while a shrinking business will be able to liquidate net working capital for use as a cash source.

A typical calculation of available cash flow is as follows:

$$\text{Cash flow} = NI + Depr - CE - LA - \Delta WC$$

where:

NI	=	After tax net income
Depr	=	Depreciation
C E	=	Capital Expenditures
L A	=	Loan Amortization
ΔWC	=	Increase in Working Capital

Over long periods of time, cash flow will generally equal net income. However, the concept of "time value of money" makes the difference between cash flow and net income very important.

TIME VALUE OF MONEY

It is a generally observed phenomenon that investors prefer to receive cash sooner rather than later. To attract investment funds, the investment must have an expected yield

above the amount of initial investment that is sufficient to induce the investor to forego use of funds for immediate consumption. The required returns for investments are largely determined by activity within capital markets (stock markets, bond markets, etc.). Since money alternatives exist for the investor, the investment decision is often the choice of investment instrument, rather than the choice of a single investment or immediate consumption.

The expected rate of return consists of 3 elements:

- Compensation for loss of value due to inflation
- A reasonable return above inflation to attract investment on a risk-free basis
- Return on investment above the risk-free rate, to induce investors to bear the inherent risk of the investment.

Compensation for loss of inflation in the rate of return is intuitively obvious. A rational investor will not forego consumption to invest if it is expected that the total amount received from the investment will provide less real purchasing power than the current purchasing power of the amount invested. It is observed from the history of capital markets, that an additional amount above the expected rate of inflation is required to attract investment funds in risk-free investments.

The risk premium on investment is the reason many different investment rates exist in capital markets at any specific time. The concept of the risk premium arises from observed market behavior that indicates that investors are generally risk averse. Risk aversion is best described by simple example. Suppose an investor has an opportunity to

invest in one of two opportunities. In opportunity "A" the investor will receive after one year, 1.2 times the initial investment (for each peso invested P1.2 would be returned) without any risk. In opportunity "B" the investor has an equal chance of receiving 0.9 or 1.5 times initial investment. In both cases A and B, the average expected annual return is 20%. However, investment B presents an element of uncertainty that is not present in A. The lack of risk in A makes it a more attractive investment, and thus preferred by investors. For opportunity B to attract funds, the price must be lowered, which will increase the expected yield above 20%. The increased yield represents the risk premium.

The example is obviously much simplified from the existing investment market. However, the investor motivation and behavior is illustrative of how risk affects required return on investments.

The time value of money is quantified by a discount rate, which is the annual rate of return required for an investment based upon its inherent riskiness. The present value of an expected amount of cash is the amount of investment that would yield a rate of return equal to the discount rate. The calculation of the present valuation is derived below.

Suppose P1.00 can be invested in an interest bearing deposit account at an interest rate, k (e.g. k = .10 for a 10% rate). After one year, the value (FV) of the total investment is

$$FV\ (1) = P1.00 \times (1+k)$$

The value after two and three years is as follows:

$$FV\ (2) = P1.00 \times (1+k) \times (1+k) = P1.00 \times (1+k)^2$$

$$FV\ (3) = P1.00 \times (1+k) \times (1+k) \times (1+k) = P1.00 \times (1+k)^3$$

The general formula of the future value in n years is:

$$FV\ (n) = P1.00 \times (1+k)^n$$

This equation can be generalized by substituting the P1.00 investment with the general algebraic variable,

PV:

$$FV(n) = \frac{PV \times (1+k)^n}{(1+k)^n}$$

This is the formula used to calculate the present value of a cash amount n years in the future, FV(n), using a discount rate, k. The present value factor (PVF) is the amount used to multiply FV to calculate present value (PV). The PVF is derived from the above equation, as

$$PVF = \frac{1}{(1+k)^n}$$

CAPITAL STRUCTURE AND THE WEIGHTED AVERAGE COST OF CAPITAL

Generally, businesses are financed with a combination of debt and equity financing. The investor providing debt financing (e.g. bank loans, bonds) is entitled to receive interest and return of principal, regardless of the

performance. The debt investor does not share in the benefit of superior business performance but will receive interest payments of the business unless the business performs so poorly that it is incapable of meeting contractual obligations of the debt contract (i.e. a state of technical insolvency).

The equity holder shares all the risks of the business performances, and receives benefits in cases of superior performance. Because of the riskier position of the equity holder, the expected rate of return is greater than the required rate of return on debt.

As the percentage of capital financed by debt increases, both the debt and equity of the firm become increasingly risky. The debt becomes riskier because the additional burden of debt service increases the probability that contractual obligations of the debt cannot be met. The equity becomes more risky because most of the proprietary risk of the firm becomes concentrated on a relatively smaller portion of the business capital. This effect is called leverage, because relatively higher debt levels cause small variations in business performance to cause larger variations in the value of equity.

One notable difference in debt and equity financing is the tax treatment of the investment return. Interest payments on debt are general deductible as business expenses for national income taxes, while returns on equity, whether as dividends or retained earnings, are not tax deductible.

The after-tax cost of capital is determined by calculating a weighted average of the after-tax cost of the debt and equity. This is called the weighted average cost of capital (WACC).

The WACC formula is:

$$WACC = (1 - L) \times E = (1 - T) \times L \times B$$

Where:

L is the percentage of capital as debt

E is the required equity return

B is the required debt return

T is the income tax rate.

THE DISCOUNTED CASH FLOW MODEL

The discounted cash flow analysis is performed by a computer model, and the output shows pro-forma income and cash flow statements for the projected period of ten years. For each year, revenues, expenses and other financial data are shown as components of the total cash flow analysis. The following discussion describes the layout of the cash flow output starting from the top and working downward.

The section of the proforma statement shows all revenue items, which are summed to show total revenue. The expense categories are divided into cash expenses and non-cash expenses (depreciation). Since depreciation is not a use of cash, this amount must be added back to income in the cash flow calculation. Explicitly separating depreciation from cash expenses helps to clarify this treatment. Cash expenses are added to non-cash expenses to calculate total expenses.

Net income before tax is calculated by subtracting total expenses from total revenue. Income tax is calculated by applying the income tax rate to income before tax. The amount of tax is subtracted from income before tax to yield after income.

The listing of non-taxable cash source (uses) shows cash flow items that do not appear on an accounting income statement. These items are listed so that a positive number indicates a cash source, while a negative number indicates a cash use. The sum of non-taxable cash items is then calculated.

The cash flow section of the output recapitulates the net income, non-cash expense, and non-taxable cash items. These items are added to calculate the net cash flow. This is the projected amount of cash to be available for distribution.

As shown earlier, the present value factor formula is:

$$PVF = \frac{1}{(1+k)^n}$$

This formula assumes the cash flow is received at the end of the period. However, in a real business situation, cash flow occurs throughout the year. For this reason, more accurate results are obtained by discounting from the middle of the period. This is accomplished by the following formula:

$$PVF = \frac{1}{(1+k)^{n-0.5}}$$

This is the formula used to calculate the present value factor in the DCF model. The present value of cash flow is determined as the product of cash flow and present value factor.

In the value conclusion section, the present value of the 10-year cash flow is the sum of each year's present value. The value of all cash flows after the tenth year (residual) is estimated by multiplying a specified residual multiple by the net cash flow of the tenth year. The present value of the residual is calculated by discounting the result over the ten year projection period. The final value conclusion is the sum of the present value of a 10-year cash flow, plus the present value of the residual.

THE DEBT-FREE CASH FLOW MODEL

Discounted Cash Flow (DCF) analyses are performed on a debt-free basis. The use of the weighted-average cost of capital as the discount rate implicitly considers the cost of debt, as well as equity in valuing the firm. The debt-free model is believed to provide the best insight into the value of NFA operating assets because it calculates the value of all income producing assets, without regard for the existing capital structure.

Disregarding the existing capital structure in the analysis is justified for several reasons. First, much of the debt burden on operating units is the result of an arbitrary accounting allocation of debt that was incurred for purposes unrelated to the business of the operating unit.

The second reason for valuing business enterprises using the debt-free cash flow model is related to the theory of financing businesses. The operations and generation of business income should be independent of the financial structuring of the firm. While the availability and cost of capital are relevant in making operating decisions, such as when to purchase equipment, the form of the capital source (e.g., debt or equity) should be of no relevance. This means that an investor in an operating business enterprise should be able to purchase the business with any combination of cash and assumed liabilities, and then proceed to alter the capital structure for optimal financial performance.

The result of the debt-free cash flow analysis is the expected total price an investor would pay, deducting the assumption of debt. It is noted that when assumed debt has an interest rate different from the prevailing market rate, the market value of the debt is different from the face value. In such a case, the price paid is the sum of cash plus the market value of the debt assumed.

The alternative to the debt-free model of DCF is valuing the equity of the business enterprise with a debt-burdened cash flow analysis. In such analysis, interest is recognized as an expense, amortization is included as a cash use, and new debt is included as a cash source. The equity rate of return is used as the discount rate, instead of the WACC. The resulting equity value plus the market value of initial debt is the total value of the business enterprise. Functionally, the two differ in the fact that the debt-burdened model considers a specific schedule of debt, while the debt-free model assumes that the firm will maintain a capital structure consistent with the assumptions made in the derivation of the WACC.

EXCERPTS FROM

INSTRUCTION MANUAL

EXPERT WITNESS - SOFTWARE

BY

VALUSOFT

I. VALUATION PRINCIPLES

A. VALUATION FOUNDATIONS

The certified public accountant is increasingly involved in appraisal and valuation questions relating to closely held businesses. As a financial expert, the C.P.A.'s responsibility extends to this difficult economic area, but the accounting profession has provided few guidelines to assist the C.P.A. in competently appraising small businesses.

The Other Resources Section of this manual contains a list of the major appraisal resources and associations. However, the following is an attempt to provide you with the necessary information and tools to evaluate a closely held corporation.

B. COMMON PURPOSES FOR WHICH APPRAISALS ARE REQUIRED

1. Estate and Gift Tax
2. Acquisition, Sale or Merger
3. Buy-Sell Agreements
4. Corporate, Partnership and Marital Dissolutions
5. Dissenting Minority Stockholders
6. Employee Stock Ownership Plans
7. Loan Collateral

1. Estate and Gift Tax

The most common need for valuation is in determining the value of specific interests in corporate, partnership, and proprietorship entities for tax purposes. This type of appraisal must take into account specific recommendations and techniques outlined by Revenue Ruling 59-60 as amplified by 68-609 in conjunction with relevant modifications interpreted from current court rulings. For a comprehensive guide to I.R.S appraisals, see the other resources section for the I.R.S. Valuation Guide. This Guide is an absolute must for any professional valuation reference library.

2. Acquisition, Sale or Merger

There are many circumstances where the value of a business interest is important to persons both within and outside of the business. Whether it be to determine a basis for a negotiating position or to reassure those involved in an ongoing transaction that reasonable economic values are being considered, Valusoft schedule output will provide clearly presented schedules and graphs.

3. Buy-Sell Agreements

Some small businesses and more commonly professional practices go through many changes in ownership. To help facilitate transfers of specific interests, Buy-Sell agreements are drawn up that determine the assets to be considered and the formulas to be used in a transaction. In this situation, the appraiser must first determine whether the value to be opined on is the fair market value (such as a sale) or the fair value (as in a possible dissolution of marriage). When determining the fair market value, the Buy-Sell will generally govern absolutely. This is due to the restrictive nature of the agreement, it limits the market and thereby sets the market value or fair market value. Whereas in the case of fair value, the value is calculated based upon economic reasonability and recognized valuation techniques with the Buy-Sell agreement as a subordinate determinate of value.

A complete Buy-Sell agreement should set forth the method of determining the value of tangible assets, fixed assets, and intangible assets at any given date, and how those values are to be divided among the owners. If any of these factors are missing from the document, consult the attorney in charge for further guidance.

4. Corporate, Partnership and Marital Dissolutions

In California, as well as many other southwestern states, community property is the rule in divorce settlements. When one spouse owns a business interest or professional practice of any consequence, an independent and objective appraisal is usually required to help the court divide the property. The appraiser chosen is generally retained by stipulation (mutual agreement) of the parties or as a court appointee. However, as is the nature of the proceeding, often opposing parties engage independent appraisers. Under these circumstances, an appaiser may be called upon to present his opinion in a formal court proceeding. In this situation, an appraiser's report and files may be subjected to meticulous scrutiny by the opposing side.

5. Dissenting Minority Shareholders

Minority shareholder valuation goes one step beyond the normal valuation process. Because minority shareholders have few rights relating to the control and direction of the enterprise and because closely held corporations declare very few dividends, minority value opinions may require a greater amount of care. Discounts may be applicable in these situations.

Many valuation assignments entail the valuation of a percent of, or interest in a particular business, as opposed to the business in its entirety. When this is the case, generally speaking, that interest, if it is a minority, will be valued at a discount from fair market value to accommodate the investor's lack of marketability or control.

To measure and apply the appropriate discount, an appraiser must look to current court rulings and academic studies. While no specific guidelines are available, the appraiser should look to approximately 30% and then adjust that figure by the degree to which the interest is a minority, has lack of control, and limited transferability. See the other resources section for further assistance in this area of valuation.

6. Employee Benefit Plan

When appraising an ESOP or other employee benefit program the appraiser must be considered fair and reasonable under the standards set by the IRS under the Employee Retirement Income Securities Act (ERISA). This type of valuation is generally an annual assignment with a large scope of analysis that may include a partial audit. See the other resources section for further assistance in this area of valuation.

7. Loan Collateral

Often banks or other investors require an analysis of the operating performance or adjusted net equity of a business. In this situation, Valusoft will provide a complete ratio analysis as well as adjusted book value estimates.

C. SCOPE OF AN APPRAISAL ASSIGNMENT

The scope of any appraisal assignment is a measure of the degree to which a particular conclusion is said to be statistically accurate. This scope may range from a review of the current financial statements to a complete audit with several calculations of value.

What's important to remember is that there is always some degree of professional liability attached to any valuation assignment because of its subjective nature. Accountants have been sued and the IRS will impose fines for values 150% over the IRS value. Therefore, to protect yourself from unwarranted lawsuits an appraiser should at least follow the guidelines set forth below. These guidelines or "Code of Ethics" have been developed by the Institute of Business Appraisers, Inc.

1. The Appraiser shall achieve and maintain a high level of competence, shall keep himself informed as to all matters involving or affecting business values, and shall accept only those assignments for which he has the necessary background and qualifications.

2. An appraisal assignment is a confidential undertaking between the Appraiser and his client. No information regarding the appraisal assignment shall be disclosed to any third party without the express consent of the client.

3. Although an Appraiser may express an informal or preliminary opinion as to the value of a business, he shall not do so until after he has obtained all of the pertinent facts and given them due consideration.

4. All formal appraisal reports shall be in writing, shall be signed by the Appraiser, and shall include the following as a minimum:

   a. A statement of the purpose for which the appraisal was made and a definition of the value estimated.

   b. A description of the business or business interest being appraised.

   c. A summary of the facts upon which the appraisal is based.

   d. A description of the appraisal method(s) employed.

   e. A statement of the conclusions reached, together with any applicable qualifications or limitations on the conclusions.

   f. A statement of the assumptions and conditions applicable to the appraisal and to the conclusions reached.

   g. A statement that the Appraiser has no present or contemplated future interest in the business being appraised, or a full and complete description of any such interest that may exist.

5. The engagement to perform an appraisal and the fee charged shall be independent of the value reported.

6. In the conduct of his business, the Appraiser will at all times observe both the letter and the spirit of applicable laws, regulations, and good business practices.

D. SPECIFIC INTERESTS

Often an appraiser is asked to place a value on a specific asset or portion of income. Usually this is in connection with a tax purpose such as a gift, capital gain, or estate. Some examples of specific assets that may need isolated appraisals are:

Tangible:	Intangible:
Real Estate	Patents
Buildings	Trademarks
Leasehold Improvements	Goodwill
Fixed Assets	Going Concern
Accounts Receivable	Copyrights
Libraries	Customer lists
	Covenants
	Franchises
	Licenses

E. ECONOMIC CONCEPTS OF VALUATION

Generally, there are five concepts of value in a business valuation assignment. They are Fair Market Value, Fair Value, Reproduction Cost [New], Value in Place, and Liquidation value.

1. Fair Market Value

Fair Market Value is the most commonly used value in business enterprise appraisals because it attempts to characterize the market response to a particular business. California courts have developed the following statement as the classic definition of Fair Market Value;

"The highest price estimated in terms of money that the interest will bring if exposed for sale in the open market, with reasonable time allowed in which to find a purchaser, buying with knowledge of all the uses and purposes to which it was adapted and for which it is capable."

The preceding definition assumes both a knowledgeable buyer and the free action of a competitive market, for these reasons a fair market value concept has limited application in special use or professional practice properties.

2. Fair Value

The Fair Value of a business interest is used when there is no market for the interest whether it be because of restrictive covenants or no market appeal. Even though the interest cannot be sold or will not be readily purchased, it may have value. Note that in California and other community property states, professional practices that are not readily saleable may be valued at their Fair Value for marital dissolution purposes. In this situation the non-professional spouse is considered a silent partner selling out their one-half community interest. And, while the practice may not have market value, it does have economic value based on the stream of income it produces.

Although no standard definition, as of yet, has been sanctioned by the courts or recognized by the valuation community, the following definition should suffice until such time. "Fair value" is defined as the dollar value assigned to the total business entity. The business encompasses its tangible and intangible assets (goodwill), offset by liabilities which existed at the date of valuation. Under the concept of fair value, tangible assets are appraised at the best estimate of their fair market value, and intangible assets are valued based upon the stream of income they produce. The result is a determination of the true economic worth of the business entity which may differ from its fair marker value, particularly for businesses which are not particularly saleable.

3. Reproduction Cost (NEW)

Reproduction Cost (New) is used when the value of a particular interest is not measurable via an income or market data approach. It attempts to value the interest by accumulating all of the costs to replace it using today's materials and techniques. Once these costs are determined, an appropriate amount of depreciation is deducted to approximate the used portion of the assets. If the costs incurred in developing these assets were accumulated over a long period of time, interest on these costs may be included in the value. This approach is generally used in special purpose appraisals and when the income produced by a specific asset cannot be divided from overall income.

4. Value in Place (USE)

The Value in Place is the value of a specific set of assets in place and being used by the business, which may differ from their individual fair market values. This value is most often used in fixed asset appraisals.

5. Liquidation Value

Liquidation value is the sum of the individual fair market values of all of the assets and liabilities within a business entity sold at distress. In this case, the intangible assets of goodwill and going concern are not considered. However, there may still exist intangible assets that have a liquidation value. These assets may include items such as patents, copyrights, customer lists, accreditations, and licenses.

II. METHODS OF VALUATION

There are three general methods of valuation to be considered in any valuation assignment; they are the Income, Market Data, and Cost methods. Each attempts to consider the entire value of a business from either the income stream, saleable market value, or the reproduction cost.

A. INCOME METHODS TO VALUATION

Generally speaking, an income method to valuation attempts to estimate the value of a specific income stream with consideration for the risk inherent in that stream. The four most common techniques in this approach are the Price/Earnings Ratio Analysis, the Discounted Future Earnings, the Capitalization of Excess Earnings, and a Muitiple of Gross Receipts. Although these approaches concentrate on the income available to the owners, they sometimes integrate other methods by considering the market value of certain fixed assets and the cost of some intangible assets.

B. MARKET DATA ANALYSIS

The Market data analysis is a method of valuation under which the subject property is compared to similar properties that have been sold recently. Sales data are then investigated and a conclusion of fair market value is then derived through comparisons. This is considered the best approach to determine the fair market value of a subject property. But, because of the general lack of market data statistics for businesses, it is used primarily in real estate valuation.

C. COST METHOD

This method is the calculation of the ecomomic value of a property by estimating the cost to replace the property with an adjustment to account for the functional, economic, and physical depreciation that has occurred to the subject property. Functional depreciation is the loss of value incurred by business assets that do not provide the same utility that new assets would provide. Economic depreciation or obsolecence is a measure of the diminution in value of a business due to its environment. Examples of this would be a depressed neighborhood or increased competition at that location. Physical depreciation is the loss of value in assets due to general wear and tear.

D. SPECIFIC APPROACHES TO VALUATION

1. Adjusted Book Value

The adjusted book value approach is the book value of assets and liabilities as presented on the balance sheet adjusted to their fair market values, which should not be confused with the business' fair market value. This approach is not commonly used for appraisal purposes because it neglects to account for the earnings or any intangible asset value other than that previously purchased by the business and reflected on the balance sheet. Its primary use is in an accounting setting.

2. Price to Earnings Ratio

The definition of the price earnings ratio is exactly what the name implies. It is the price divided by the earnings of either the total business or an individual stock. To utilize this approach the appraiser must locate comparable businesses price to earnings ratios. The subject business' earnings are then adjusted to resemble the true earnings of the operating entity. This means that non-reoccurring, excessive, and personal items, whether they be expenses or revenues should be added and/or deducted to represent the true " economic " income of the entity. Once this is accomplished, P/E ratios can be reviewed and provide a reasonable range of values for the subject business.

The theory behind this approach is that the market will determine what price is an acceptable return for the earnings stream provided by a business within a specific industry. Although this is primarily a market data approach, and when properly applied, it has the advantage of providing a market based valuation, in general use, it is very difficult to apply properly.

The two main difficulties in using this valuation approach are finding comparable product or service type businesses traded publically and adjusting those P/E ratios to the subject business.

The first problem requires a great deal of research by the appraiser. It is one thing to find a business within the same standard industrial classification, (SIC Code), and quite another to determine whether that comparable carries a similar product line, works in similar markets, and is motivated by similar financial constraints. To collect ratios and other financial data on industries and specific companies, an appraiser may either look to financial reference books or national financial data bases.

The second issue relates to the size of the entities being compared and the value derived. Even if there was exact comparability in product line, there are still significant differences between a small owner-operated business and the 100 million dollar professionally managed business on the stock exchange. There is also some question as to the appropriate premium to be used on the value derived. Because P/E Ratios are considered to be indicators of marketable minority interests, some premium is usually indicated.

When relying on a price to earnings ratio derived from a study of shares of publicly traded companies, premiums may be required. Prices quoted for traded shares of public companies on any of the various exchanges or in the "over the counter" market represent the per share value of marketable minority interests. If a specific block allows the purchaser to control a corporation, a higher value (relative to minority position) is justified.

A measure of the difference in value between a controlling interest in a corporation and a marketable minority interest in a corporation can be found in mergers or in public tender offers where the merger or the tender offer, if successful, will give the acquirer a control postion. The market price of the stock before the merger or tender offer is related to the higher merger or tender offer price, resulting in a premium paid for the control position. In recent years, control premiums in major mergers and acquisitions ranged from less than 25% to more than 130% over the unaffected market price (the marketable minority price prior to any price activity related to the takeover).

In summary, the use of the P/E ratio for a small business is usually appropriate only as a subordinate valuation technique to provide a range in which the appropriate value may be found when other better approaches are available.

3.Discounted Future Earnings

The discounted future earnings technique is an income approach to valuation that attempts to value a business by predicting the most likely future earnings, discounted to the present using risk adjusted interest rates for that business over that period. If earnings are not projected into perpetuity, the present value of estimated net assets in the last year of projected earnings should also be included in fair market value.

To accommodate this approach in a valuation assignment a great deal of analysis is usually required in order to determine the projected ecomonic income of the business. The apraiser should consult both the business owner and industry journals for assistance in this area. The approach also requires the appraiser predict proper discounting factors over that same period.

Discount rates are based on the normal economic business risk plus a return on net assets.

In summary, this approach is used widely in large businesses and income producing real estate, but has been found to be to difficult to apply to very small business enterprises.

4. Capitalization of Excess Earnings

The capitalization of excess earnings is the most widely used valuation technique for a small business assignment. It encompasses all three valuation methoudologies of Income, Market, and Cost. Simply stated, this approach combines the fair market value of tangible assets, with the intangible asset value of average or weighted average excess earnings discounted at a proper business risk rate.

To accomplish this, the business' balance sheet at the date of valuation is adjusted to reflect the fair market value of the assets and liabilities Then, the adjusted net income of the business is analyzed to determine the excess earnings available to the owner. Excess earnings are defined as net operating income, with an adjustment for the fair value of owner/operator services, less a return on the investment in the business. These excess earnings are then capitalized into perpetuity using a reasonable business rate of return. The sum of these two values is the fair market value of the business.

Because the capitalization rate is so misunderstood, it is appropriate here to examine just what the capitalization rate is and how it can be calculated. The capitalization rate is the rate by which a specific income stream or stream of benefits can be evaluated as to their present value. The equation for the capitalization of income is V=I/C. Where V=the present value, I=the income stream or stream of benefits, and C=the capitalization rate. The theory is that a continuous stream of income is worth the amount of money it would take to reproduce that income stream, given an appropiate interest rate for that type of investment. Thus, if you were to invest $100 in a bank account that paid 10% you would be entitled to $10 per year, in perpetuity.

The capitalization process reverses this equation. If you were to receive $10 per year from your business, and a 10% return was expected on your business investment that stream of income would be worth $100 (100=10/10%).

Capitalization rates vary among particualar types of businesses and from one period of time to another. Expressed as a percentage, the more speculative the business income stream the higher the capitalization rate, and conversely, the more stable the income stream the lower the capitalazation rate. Important factors to consider when choosing a capitalizaton rate are as follows:

1. Type of business
2. Stability of the income flow
3. Strength of client base
4. Management ability
5. Competition, and
6. Environment or the continued need for the product or service.

From a theoretical standpoint, the capitalization rate has three separate elements. The capitalization rate is the sum of these individual components:

Real return- real return is the compensation for the use of capital, or stated alternatively, for the opportunity cost of deferring the immediated consumption of the capital. This return may be calculated by examining the difference between inflation and risk free government bonds. Risk free government bond rates include the elements of inflation and real return. Thus, if the inflation rate is removed the remainder should be the real return. Historically this real return ranges from 2% to 4%.

Inflation premium- Investors have grown to expect a decline in the value of the dollar. Thus, they must be compensated for the loss in value, or purchasing power of their money. To calculate this rate, the appraiser must look at the holding period of the investment. which in businesses is relatively long. One guideline in estimating this rate over a long period of time is the Treasury Bond market. Tresury bonds are used because they are separated as to their maturity or holding period and their rates are almost exclusively based on inflation and real return.

Risk premium- unlike the more standard investments that we are familiar with, businesses are very risky. Even sure bets are highly speculative. Here is an illustration to clarify this concept.

0%	5%	10%	20%	30%
Savings Accounts	Money Market	Trust Deeds	Business Investments	

As you can see, business investments may range from 20% to 100% or even more, while other, more standard type investments typically do not exceed 25% The reasons for this are quite simple, businesses, are by their nature unstable If a business is producing a constant stream of high income, the market of supply and demand will naturally move toward providing more supply for that product or service, and through this action of the market the high constant flow of income previuosly produced by that business will suffer

Other factors supporting businesses as high risk investments are the number of failures, the lack of environmental controls, and the stability of employees, suppliers, customers, and management.

Therefore, based on the above information we have prepared the following analysis in order to assist you in the estimation of an appropriate capitalization rate for a particular business.

	Choose 4 - 20 4=Good 20=Poor
1. Stability of income flow	
2. Marketability	
3. Management ability	
4. Competition	
5. Continued need for the product or service	
Capitalization Rate %	%

Note that this will only provide a rough approximation. The majority of capitalization rates will range from 30% to 75%.

5. Gross Multiple Approach

Under this approach, the value of a business' goodwill is determined by a multiple of gross receipts. This method has the advantage of being quite simple but it fails to account for many relevant factors. This approach excludes the profit margin on the revenue, the ecomomic factors of risk, the current fair value for a non-owner operator to run the business, and the fair market value of the tangible assets.

Therefore, the multiple of gross revenue is only applicable in situations where there is an identifiable marketplace that values or accepts values derived from this approach. In essence, it is a rule of thumb approach for a variety of specific types of businesses, each having their own multiple. To determine market multiples of gross income, contact local business brokers for current trends.

6. Rule of Thumb Approaches

Due to the general lack of availability of data on small business sales and the great need to know approximate values by owners, brokers, buyers, and appraisers rule of thumb approaches to valuation have been developed by trade associations and business brokers. These formulas are averages based on comparable sales in the marketplace. Their use should be limited to a check on the ecomomic reasonability of values derived from more accurate methods of valuation.

Here is a partial list of rules of thumb often encountered.

1. Accounting Services - 90% to 150% annual billing.
2. Answering Services - 13 to 16 current monthly billing.
3. Insurance Agencies - 100% to 150% of annual gross commissions, based on account attrition.
4. Travel Agencies - 10% of gross sales or one times gross commissions.
5. Convenience Groceries - one to two times monthly gross sales plus the fair market value of inventory and fixed assets.
6. Mobile Home Parks - 3 to 8 times monthly gross receipts, inclusive of equipment and real estate.
7. Drive-in Restaurants - 30% to 50% annual gross sales.
8. Small Manufacturing - 5 times net after tax earnings.
9. Day Care Centers - $500 to $1,000 per child enrolled currently.
10. Gas Stations - $1,000 for each 10,000 gallons of gas pumped per month, plus gas in the ground.

11. Funeral Homes - market value of tangible net worth, plus a bonus of $500 to $1,000 for each burial annually.

12. Barber Shops - $900 to $1,200 per chair, plus 10% to 20% annual net profit.

13. Auto Repair Garages - after a minimum income for the owner/mechanic, a multiple of two times historical monthly receipts is added to the market value of all tangible assets, less any liabilities.

III. FINANCIAL ANALYSIS

A. INCOME STATEMENT

A number of key variables must be quantified before the approaches described above can be used. The basic problem experienced when attempting to place a value on a small business or professional practice concerns the accuracy or applicability of the financial information available. In most cases, the financial reports have been constructed more to minimize tax liabilities rather than to provide a true economic picture of the business operations. Consequently, a careful review of the financial statements is essential to provide an approximation of the real economic income of the business. This review should consist of revenue, expense, accounting method, and cash flow analysis focusing on excessive, personal and nonreoccurring business expense and revenue.

These adjustments should be made in the Income Analysis Schedule of the program. The most common adjustments are made to the following items:

1. Cash vs. Accrual Basis Accounting
2. Employee Benefits
3. Interest
4. Auto Expense
5. Rent Expense
6. Taxes
7. Contributions
8. Extrodinary and Nonreoccurring Items
10. Depreciation.

1. Cash vs. Accrual Basis Accounting

Many businesses prepare their financial statements on the cash basis of income recognition. For valuation purposes this must be adjusted to accrual basis to reflect the economic income and expense activity of the business. To calculate this annual adjustment, subtract ending accounts receivable and accounts payable from beginning accounts receivable and accounts payable, any excess is added to net income, and any deficiency is deducted from net income. This analysis may be included or removed automatically as an adjustment in the Income Analysis by choosing the Schedule menu Accrual Adjustment option.

2. Employee Benefits

Most small businesses maintain an employee benefit account for meetings, insurance, and education. These expenses are acceptable as normal business deductions provided they are not excessive or do not contain owner related expenses. The analysis of these accounts must be left to the subjective judgement of the appraiser. No clear cut standards can apply because of the variations in these accounts.

3. Interest

Both interest expense and interest revenue are removed from the income statement as nonoperating items in very small business entities. They are considered nonoperating because they are related to the working capital of the business which is presumed to be an intergal part of the current owner's personal financial strength. That is, a perspective buyer would bring in his own working capital situation to the business whether it be financed or owned.

In larger more self sustaining operations, generally grossing over 5 million dollars annually, interest expense and revenue are considered capital structure components of the business. Therefore, they should be viewed as normal operating items.

4. Automobile, Entertainment, and Travel

These accounts should be reviewed carefully with the owner or manager because of their susceptibility to abuse. Often a spouse's gasoline or a family trip will be found in these accounts. Upon first glance, this may seem to be an insignificant set of accounts to analyze. However, when under the scrutiny of opposing counsel, and you've missed a $5,000. adjustment that would have been capitalized by a factor of 8, you'll wish you had looked more closely.

5. Rent Expense

Generally, a review of rent expense is unnecessary since the market will determine what a fair rent is via the lease agreement. But, when the property is owned by the business (no rent expense) or is charged an estimated market rent by the owner, the appraiser should analyze the appropriateness of the expense to the business and make any necessary adjustments to approximate a fair market rent. The best sources for an appropriate fair market rent expense are real estate brokers and agents in the community. Note: some leases may have intangible economic value by virtue of a contract period based on a lower than market rent. This intangible value is determined by calculating the future value of the offset between contract and market rent over the period of the lease, at a passive compound rate discounted to the present value at a risk adjusted rate. See the Cost approach to valuation for further discussion on lease value.

6. Taxes

Income tax liability is almost always deducted, whether actual or estimated for valuation purpose. In a Price to Earnings analysis, after-tax net income is used for comparability. In the Capitalization of Excess Earnings and Discounted Future Earnings analysis, values are calculated based on the actual after-tax income derived from operations.

However, in a small business setting, and to some extent in a larger setting, two separate businesses may have vastly different tax liabilities due to net operating loss carrybacks and carryforwards, investment tax credits, the legal form of the entity, (sole owner, partnership, corp.) and other factors. In these situations adjustments should be made to mitigate the effect of any unusual and extraordinary tax items.

7. Contributions

Contributions are added back to the net income of the business as they are generally assumed to be a personal use of funds by the owner.

8. Extrodinary or Nonreoccurring Items

When analyzing a business' historical earnings in an attempt to determine a stable income base, the appraiser will often make quite substantial adjustments to the income or expense in order to eliminate items that are not of a regular operating nature. By doing this, the appraiser can calculate a more reasonable representation of the business' past and future earnings base. Examples of these items would include fire loss, temporary economic downturns in specific economies or industries, or any other expenses or revenues that the business would not be reasonably expected to incur.

9. Depreciation

In day-to-day analysis, depreciation expense is a common and accepted business expense for valuation purposes. However, in today's tax environment, excessive depreciation (accounting depreciation greater than ecomonic depreciation) is prevalent. When this is the case, the appraiser must analyze to what extent and in which years this excess depreciation expense occurred. Once this amount is calculated, the excess is added back to the income in the years in which it was taken in order to reflect the real ecomonic income of the business.

To calculate this add back, the fair market value of fixed depreciable assets is determined by a separate fixed asset appraisal. This amount is then divided into the book value (cost less accumulated depreciation) of those same fixed assets for a determination of the percentage of excess depreciation taken. This percentage is then multiplied by annual depreciation will give the appraiser an approximation of the annual excess depreciation expense taken. This excess is then added back to the net income of the business, in those years for a determination of the operating earnings of the business entity.

B. BALANCE SHEET

The following is a partial list of adjustments that may need to be made to net assets for a determination of adjusted book value in the Tangible Asset Analysis Schedule.

1. Intangibles
2. Allowance for Accounts Receivable
3. Fixed Assets
4. Inventory
5. Nonoperating Assets and Liabilities
6. Supplies

1. Intangibles

All intangible assets presented on the operating statements of the business, whether purchased or developed internally, should be removed. If these assets do have value, it will be reflected in the income or intangible portion of the valuation analysis.

2. Allowance for Accounts Receivable

For valuation purposes, accounts receivable must be reduced to their economic value or net realizable value. In order to accurately determine the net realizable value of accounts receivable, a contra asset allowance account is created to approximate the amount of unrecoverable receivables. The appraiser must determine if this account is reasonable with consideration for past accounts receivable history.

Economically, the Net Realizable Value of accounts receivable should be further reduced by the estimated tax liability associated with its collection. However, in a litigation setting, courts generally maintain that unless a tax is both immediate and specific it should not be considered for valuation purposes.

3. Fixed Assets

As an accountant, the scope of your expertise will not include fixed assets. However, in many smaller business assignments, fixed assets may be an important factor in the overall valuation. In this situation, we suggest a qualified fixed asset appraiser be retained to determine the Value in Use of the operating fixed assets of the business. The values derived should replace the values stated on the balance sheet in the Tangible Asset Analysis.

4. Inventory

Because of poor maintenance, lack of controls and accounting treatment, inventory value stated on the books may be stated above or below fair market value. This may require the conversion of LIFO or FIFO systems or a physical check by you or management in order to determine fair market value.

5. Non-Operating Assets and Liabilities

Some valuation approaches determine the fair market value of a business including net assets solely based upon the income stream produced by the operations of the business, (Price to Earnings and Discounted Future Earnings). Under these approaches the values derived will include only the net asset value of the operating entity. In order to determine the fair market value of the corporation or total business entity it is necessary to add back nonoperating assets and deduct nonoperating liabilities.

6. Supplies

Although supplies inventory is often not reported on the books, it is an valuable tangible asset of the business. In order to estimate the value of this asset, one half of one months supplies expense is usually held out as fairly representative of this value.