VALUATION OF DISTRESSED COMPANIES

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James P. Catty

PART I - BACKGROUND

Valuations of distressed companies are one of the more important but least written about activities undertaken by valuation analysts. Today we will examine some procedures in this area and compare them with those in the more familiar tax field. Both are specialized segments of law, with separate established tribunals, ultimately governed by rulings of the Appeal and Supreme Courts, as well as by codes and regulations.

Distressed Companies

A distressed company is one that is encountering difficulties meeting its debts on a current basis, and may therefore be deemed insolvent. This term has many definitions: Section 101(32)(A) of the U.S. Bankruptcy Code (the "Code", or "U.S.C.") defines it as experiencing:

> ".... financial condition such that the sum of such entity's debts is greater than all of such entity's property, at fair valuation, exclusive of:
> i. property transferred, concealed, or removed with intent to hinder, delay or defraud such entity's creditors; and
> ii. property that may be exempted from property of the estate under section 522 of this title."

This definition is commonly referred to as Balance Sheet insolvency; there is also Cash Flow insolvency when the firm is unable to meet its obligations as they come due, often referred to as the "equity test". The Uniform Commercial Code blends the two and pronounces that insolvency occurs when there either is an inability to pay one's debts as they mature, or when they are greater than assets on a fair market valuation basis.

Background to the Code

Many of the early North American settlers were debtors; some had immigrated under an indenture, others were running from an old world debtor's prison. For that very reason, the Founding Fathers recognized a need to impose rules for equitable distribution of the assets, or proceeds, resulting from a troubled financial situation. The original law related to individuals rather than businesses, and a large portion of the Code still deals with their problems.

To accomplish these goals, the U.S.C., as did its predecessor, the Bankruptcy Act, first created in the late seventeen-eighteens, contains various provisions which affect valuations of businesses, assets and sometimes liabilities. A business need not be insolvent in either sense in order to initiate a petition for protection under the U.S.C. The essential condition is that its debts cannot be met in the ordinary course of business.

In bankruptcy proceedings, business valuations are frequently used: to prove, or disprove, solvency; to obtain credit; to determine if the reorganization plan provides a better return to creditors than a liquidation, and relating to preferential transfers and fraudulent conveyances.

Chapter 11

Under the Code, all claims are ranked by seniority, with secured creditors heading the list and stockholders at the bottom. Valuations play a central role in Chapter 11 negotiations. A firm's indicated value determines the assets to be divided among claimants and drives projected pay-outs and recoveries. The factors that lead to reliable estimates of values, such as there being a market, do not exist in bankruptcy, which is an administrative process. There is not likely to be an active market for control of the assets of a bankrupt firm, because it is strongly discouraged by the structure of Chapter 11. Capital markets supply no oversight, because management is running the business for the benefit of the creditors as a "Debtor-in-Possession" and can get fully secured financing as such; bankruptcy law therefore resolves valuation differences through negotiation.

Any reorganization plan is premised on an estimated value for the restructured firm. Management has substantial control over the process, with an exclusive right to initially propose such a plan. Creditors who disagree can either vote against it, acquire more claims to influence the vote, lobby for an alternative value, join an official committee, or align themselves with management to develop a plan that better serves their interests.

If the value is low, giving senior creditors a majority of the resulting stock and junior creditors little or nothing, the latter often allege that the seniors obtained management's support by offering them employment contracts and stock or options in the new entity. In any case, creditors can petition the court to remove exclusivity and file a competing reorganization plan, or request a formal valuation hearing to assess if the plan is "fair and equitable" under U.S.C. Section 1129(b)(2).

Such a valuation hearing must be held whenever one or more classes of claimholders vote against the reorganization. If the present value of the cash and securities to be distributed to them equals the allowed value of their claims, or if no consideration is received by anyone in a more junior class, the plan can be "crammed down" on the dissenters. In practice, both, valuation hearings and competing plans, are relatively uncommon; normally the Cash Flow Projections and the values they imply arise from judicial weighting of competing economic interests.

Solvency Analyses

One purpose of the Code is to see that recoveries to unsecured creditors are maximized. As well as establishing the Fair Value of the reorganized entity in Chapter 11, a valuation analyst may also be engaged to prepare special studies to ensure that the debtor has all of the assets it should have for profitable future operations.

As well, solvency analyses are prepared under fair value standards to first determine if a particular transaction is voidable; these include preferential transfers (U.S.C. Section 547) and fraudulent conveyances (U.S.C. Section 548). Both of those and the concept of solvency are discussed later.

Retention and Fees

This is an important topic; professional fees charged for services approved by a bankruptcy court are considered administrative expenses and therefore a first priority claim under U.S.C. Section 507 (a)(1). This means that it is very likely the valuation analyst will have first dibs, together with the attorneys, if there is any money left after the secured creditors have been satisfied. Sometimes it is possible to "carve out a special exception", so that professionals may be paid if engaged by counsel; a retainer of 50% of the estimated fees can often be arranged, and it is wise to request that.

Application for Retention

To be employed in a bankruptcy matter, it is necessary to prepare an affidavit as well as an "application for retention". While the requirements differ in various parts of the country, these documents will normally include:

- Firm's name and address
- Professionals asking to be retained
- Nature of all relationships or business associations with any other party to the proceedings, including the debtor, creditors, attorneys, etc.
- Qualifications of the professionals, indicating past bankruptcy or insolvency experience
- Statement as to whether or not professional services have previously been rendered and if there is a claim against the estate as a result
- Description of professional services expected to be provided
- Estimates of the anticipated fees and expenses.

The United States Trustee in each jurisdiction has guidelines to be used for the evaluation of applications; services should not be commenced until and unless his or a court's approval is obtained. Once the services have been provided, the debtor should be billed in accordance with local guidelines. Virtually any party to the bankruptcy proceedings may object to a valuation analyst's employment or fees. In such cases, there may be a hearing, which it is another reason why it is desirable to be employed by counsel.

Valuing Specialized Assets

When real estate, property, plant & equipment are involved, the valuation analyst should engage a real estate, machinery or other technical appraisers as subcontractors; do not try to do it on your own, as this will expose you to criticism and doubts. Another group of assets, which now represent a greater portion of a business than in previous years and may require the services of a specialist, is computer hardware and software.

Because of the large amounts that may be involved and the specialized nature of their valuation, the experience and credentials of the selected technical appraiser will undergo intense scrutiny by all parties. Obviously, he must be a highly qualified expert, but qualifications are not the determining factor in him arousing confidence in his conclusions; it is the availability of appropriate data, which the valuation analyst must obtain from all sources. Courts have repeatedly ruled that a valuation is only as reliable as the facts on which it is based and the logic with which they have been analyzed.

Reports Must Stand on Their Own

In normal appraisals, the client and the valuation analyst are in direct contact, collaborating in defining the assignment. The expert then prepares the analyses, reaches a conclusion and issues a report. The client has the opportunity to challenge the data and assumptions before the final document is completed; the expert may also be required to elaborate on and clarify the information.

However, in bankruptcy and restructuring situations, the end-user will likely not be the client. The debtor, creditors, investors, judges, lawyers and accountants, all of whom are unlikely to have direct access to the expert, may be relying on it. If these third parties are not fully informed in the document regarding the definition and scope of the assignment, they may misinterpret some aspects. To minimize such possibilities, the report should give more details as to the seven valuation fundamentals which are discussed later under Methodologies.

PART II - VALUATION SERVICES FOR DISTRESSED COMPANIES

Current economic conditions, and the nature of the litigation surrounding recent cases, such as Enron and WorldCom, have brought bankruptcy proceedings to the forefront of accounting services. There is a distinct need for the valuation of distressed companies in connection with the determination of:

- Liquidation proceeds
- Value of intangible assets
- Secured claims

- Solvency analyses and asset recoveries
- Reorganization plans.

Valuation analysts may be called on by creditor committees, Debtors-in-Possession, Trustees, attorneys, bankruptcy courts, company management and turnaround specialists to provide these services.

Liquidation Values

Section 1129(a)(7) of the Code requires that creditors or stockholders who do not vote in favor of a company's plan of reorganization under Chapter 11 be given value equivalent to what they would have received if the entity was liquidated under Chapter 7. This is referred to as the "best interest of creditors test". As generally a few creditors or stockholders either abstain or vote against the reorganization plan, the court will normally need to establish the firm's liquidation value; often management will pre-empt such a hearing by including the Chapter 7 liquidation value in the disclosure documents with its reorganization plan.

Intangible Asset Valuations

Valuing intangible assets is difficult, both in identifying and determining the appropriate concepts; it is even more complicated in a bankruptcy. Accurate and complete identification of all intangible assets held by a distressed company is essential to maximize the amounts available for distribution. Purchased goodwill, patents and trademarks will most likely be reflected on a Balance Sheet at amortized historic acquisition costs. However, internally generated items, such as customer lists, assembled workforce and favorable contracts or leases, especially if purchased before 2002, when SFAS 141 and SFAS 142 became effective, or acquired in a pooling, are unlikely to be specifically identified. Therefore, comprehensive analyses of operations must be undertaken to ensure that all intangibles are identified.

Determining the appropriate Premise of Value is particularly difficult when dealing with intangible assets in bankruptcy, because certain intangibles, such as an assembled workforce, are generally available only on a going concern basis, while others, such as a customer list, can be bought and sold on a liquidation basis, separate from the company. Another concern to the valuation analyst is the ownership of the intangible assets and how they are affected by the bankruptcy.

This process differs from ordinary intangible asset valuations in that the assets may be permanently or temporarily tainted (negatively affected) by the bankruptcy, the possibility of being sold on liquidation, or the lack of an established market. Analyses of comparable intangible asset sales in a bankruptcy setting may provide empirical evidence with respect to the viability of an intangible and its resulting value after reorganization. As shown below, in bankruptcy, intangible assets may be valued by an Income, Market, or Cost Approach.

Approach	Intangible Assets Typically Valued	Special Considerations
Income	Patents, trademarks copyrights, customer lists, favorable supply contracts.	Valuation of intangible assets, based on either the incremental revenue or the incremental cost reduction. Appropriate assignment of income stream to intangible asset over remaining useful life is difficult but crucial.
Market	Franchise agreements, liquor licenses, easements, leasehold interests, development rights, loan and credit card portfolios.	Availability of market data may be limited and/or irrelevant. If intangible asset being valued does not exist in an established marketplace. Market Approach will not yield useful information.
Cost	Assembled workforce, blueprint and technical drawings, computer software, training manuals.	This Approach yields a value relating to the cost to create or recreate the Intangible Asset and therefore does not incorporate its income effects or marketplace dynamics.

Secured Claims

Under the Code, hearings may be held to determine the secured portions of creditors' claims, which may not exceed the value of related collateral; additional amounts are deemed unsecured. Assets, such as machinery, equipment, or real estate are frequently pledged as collateral. In addition to valuing the collateral as of the current date, the valuation analyst may be requested to determine subsequent changes in value. These determinations are necessary to conclude if the Debtor-in-Possession or the secured creditor will be granted use of the collateral.

When valuing collateral, the Premise of Value may be going concern, liquidation, or somewhere in between. As always, it is dependent on the facts and circumstances, with consideration being given to the highest and best use of the assets. Although the Code does not mandate a specific approach in valuing collateral for secured claims, the courts generally prefer the Market Approach. If there is insufficient market data, the Cost Approach, with replacement cost adjusted for the assets' current condition, has been favored over the Income Approach.

Solvency Analyses and Asset Recoveries

Asset recovery actions available to the Trustee or Debtor-in-Possession under the Code include preferential transfers, fraudulent conveyances and requests for reclamation, all of which are discussed in detail in later sections, as are solvency analyses. For those, establishing the appropriate Premise of Value is again of utmost importance. Courts generally require the going concern premise, unless explicit, credible evidence exists supporting the use of liquidation value.

Reorganization Values

Determining the value of a distressed company before the development of a reorganization plan and the valuations required to confirm it are very profitable services. Although a valuation of the distressed company before the development of a reorganization plan is not required by the Code, that information may facilitate negotiating the plan.

An accurate assessment, as provided by U.S.C. Section 1129 of the feasibility of the reorganization plan, is crucial. The courts do not favor additions to the plan, unless they are outlined in it initially. It is therefore imperative that the court be provided with adequate information on which to base its decision to discharge the company from bankruptcy. This should include a substantiated forecast of future operations and projected Balance Sheets, a proposed capital structure, and details of measures to be implemented to ensure adequate working capital. The premise should be going concern, and the Discounted Cash Flow method is preferred.

PART III - PREMISES AND STANDARDS OF VALUE

A Premise of Value is the overall conceptual framework applied; the most common are:

- Value in use, as part of a going concern
- Value in place, as part of an assemblage of assets
- Value in exchange, in an orderly disposition
- Value in exchange, in a forced sale.

Value in use is the value of an asset based on its ability to contribute in its current situation. Value in place is premised on the value of an asset installed in its current location. Value in exchange compares the value of an asset to comparable items available for sale.

Going Concern

A valuation of a normal (not distressed) company is generally based on the premise that it is a going concern; at times it is also applicable in bankruptcy. It is commonly considered in the analyses of secured claims, the values of the associated collateral and reorganization plans.
The following cases mandated the application of the going concern Premise of Value:

Court Case	Description
Andrew Johnson Properties, Inc. (DC Tenn. 1974)	The debtor was a going concern at time of asset transfer, therefore property must be valued as a going concern.
Matter of Taxman Clothing Company 905 F.2d.166 (CA-7, 1990)	Subsequent events, i.e. bankruptcy, should not be considered, therefore valued as a going concern.
In re PWS Holding Corporation 228 F.3d.224 (CA-3, 2000)	Debtor should be valued as a going concern in determining debtor's solvency position subsequent to a leveraged buyout position.

In the Taxman Clothing case, the court stated:

> "Fair Market" or "going concern" value, although presumed to be determined free of impermissible hindsight, is not determined in a vacuum - free of external stimuli. In fact, fair market value presumes that all relevant information is known by buyer and seller. It follows that a party purchasing assets at the time of the alleged preferential transfer would be aware of all relevant factors, which would include knowledge of a massive business-wide fraud and environmental contamination; otherwise, that party would be the victim of fraud. In summary, fair market value entails a hypothetical sale, not a hypothetical company."

Liquidation

Liquidation values are common in bankruptcies, being used when: (a) establishing insolvency in connection with preferences and fraudulent conveyances; (b) determining Chapter 7 liquidation amounts; and (c) assisting creditors to accept or reject a reorganization plan. Such amounts may be either "orderly liquidation" or "forced sale". Orderly liquidation allows a sufficient period to expose the asset to the appropriate market and obtain a competitive price; forced sale gives just enough time for the asset to be disposed of, without any concern as to the amount realized.

Applicable Premise

The Premise of Value adopted must accurately represent the facts and circumstances of the situation. When valuing distressed companies, specific consideration should be given to the concept of "highest and best" use. Another unique aspect of such valuations is that different premises are required by separate portions of the Code: Going Concern under Chapter 11, and Orderly Liquidation under Chapter 7. Several cases that mandated a going concern premise are set out above. Therefore, analyses of not only all relevant facts, circumstances and also the precedents are necessary for the valuation analyst to properly determine the appropriate Premise of Value.

Standards of Value

The Standards of Value for distressed companies are described by the Code, case law and State statutes, as follows:

Bankruptcy Code	Reasonably equivalent value, Fair valuation
Case Law	Fair valuation, Present fair saleable value
State Fraudulent Transfer Acts	Fair valuation
State Fraudulent Conveyance Acts	Present fair saleable value.

"Fair valuation" has been interpreted in bankruptcy cases to be similar to Fair Market Value as defined in Rev. Rul 59-60; "reasonably equivalent value" and "present fair saleable value" have also been interpreted to mean Fair Market Value. Questions as to the proper Standard of Value should be discussed with an experienced bankruptcy attorney.

In the balance of this presentation, the term "Fair Value" will be used to designate values under the Code, compared with "Fair Market Value" for those relating to tax.

Fair Valuation

The phrase fair valuation, although used in the Code, is not defined by it; the courts have normally applied a two-step process to obtain it. The first is to consider if the debtor was a going concern or "on its death bed" [In re DAK Industries, Inc. 170 F. 3d 1197, 1199 (CA-9, 1999)]. Once that analysis is complete, the debtor's assets can then be valued at Fair Market Value if it is deemed a going concern, or at liquidation value, if not. In summary, a fair valuation of the debtor's assets begins with establishing its status and ends with the Balance Sheet Test to determine solvency.

No Willing Seller

When determining the value of a debtor's assets to establish solvency, it is not appropriate to deduct the costs and expenses associated with their sale [In re Golden Main Acquisitions, Inc. 2221 BR at 968]. This means that Fair Value focuses on what the willing buyer would pay, and not necessarily on what a willing seller would accept. Obviously, it is not proper to rely on Book Values, as those reflect historic costs rather than Fair Market Value. Interestingly, adjustments to liabilities in accordance with GAAP have been ruled appropriate [In re Coated Sales, Inc. 144 BR 663, 669 (Bankr S.D.N.Y. 1992)].

Acceptable Methodologies

In a 1943 case [Group of Institutional Investors v. Chicago, M., St.P. & P.R. Co., 318 U.S. 523, 540], the Supreme Court explicitly recognized that "[value] gathers its meaning in a particular situation for the purpose for which a valuation is being made". Congress, in U.S.C. Section 506(a), followed the Supreme Court rulings indicating that "[value] should be determined in light of the purpose of the valuation and of the proposed disposition of the property" and that "'Value' does not necessarily contemplate forced sale or liquidation value of the collateral; nor does it always imply a full going concern value. Courts will have to determine value on a case-by-case basis, taking into account the fact of each case and the competing interests in the case."

Following this guidance, the courts have historically allowed virtually every accepted method to determine the value of a business enterprise (as well as that of collateral). Examples are: replacement value: [Associates Commercial Corp. v Rash, 520 U.S. 953 (1977)]; wholesale value: [In re Maddox, 200 B.R. 546 (D.N.J. 1996)]; retail value: [Metrobank v Trimble (In re Trimble) 50 F.3d 530(8th Cir. 1995)]; Fair Market Value based on replacement cost: [Winthrop Old Farm Nurseries, Inc. v New Bedford Inst. For Sav. (In re Winthrop Old Farm Nurseries, Inc., 50 F.3d72 1st Cir. 1995)]; a midpoint value: [General Motors Acceptance Corp. v Valenti), (In re Valenti) 105 F.3d55, 62 (2d Cir. 1997)] and a midpoint standard [In re Rowland, 166 B.R. 172, 176 (Bankr N.D. fla., 1994)].

In spite of this, for most of the last century, one of the key areas of agreement among the judiciary is that the value of a going concern, as well as the value of collateral, is based on its income earning capacity. Justice Douglas in Consolidated Rock Prods. Co. v Du Bois, [312 U.S. 510 (1941)] cited with approval Justice Holmes' decision from Galveston, Harrisburg & San Antonio Railway Co. v Texas, [210 U.S. 217 (1908)] that "the commercial value of property consists in the expectation of income from it." As a result, whenever possible, valuations of income producing entities or assets should be a going concern value based on the debtor's earning capacity using a Discounted Cash Flow method rather than other concepts.

Valuation Approaches

The Income, Market and Cost Approaches should all be considered when performing a valuation of, or for, a distressed company. In certain instances, bankruptcy courts have preferred one approach to the others. Generally, an Income Approach is chosen when the debtor is involved in reorganization and expects to continue in business after successfully completing it. Asset or Market Approaches are commonly used for liquidation values, either at the entity level or for individual items.

Special Risks

While every engagement is different, the risks associated with distressed companies add a unique element to valuing them. In addition to having an understanding of and familiarity with the Code, the valuation analyst must consider certain risks specific to bankruptcy and their impacts on the value of the entity.

Those relate to the reasons for the filing, the resolution of the bankruptcy, and the ability to obtain a subsequently viable entity. He should understand the reasons the entity filed for bankruptcy and, if it is proceeding with a reorganization plan, the courses of action to be taken to minimize risks. For example, if the bankruptcy was because the primary product line did not succeed, what items are to replace it, and how certain is management that they will sell. Similarly, if the bankruptcy was due to excessive debt, does management include a replacement CFO with adequate experience and knowledge of refinancing?

Risks specific to an entity are often incorporated into its value conclusion via the Capitalization or Discount Rates under an Income Approach, and via the selected multiple under a Market Approach. While risk is not explicitly considered in the Cost Approach, it is implicit in the calculation of Fair Market Value on the basis of individual assets and liabilities.

When developing a Capitalization or Discount Rate, or adjusting a market multiple to suit a distressed company, the following risks should be considered:

- Liquidity and working capital after reorganization;
- Potential for under-investment in property, plant and equipment;
- Capital structure after reorganization;
- Uncertainties with respect to projected operations;
- Changes in the fixed and variable cost structure after the reorganization from pre-bankruptcy;
- Continued inefficiencies.

PART IV - VALUATION FOUNDATIONS

Every Valuation Report, in a bankruptcy situation, must include:

1. Objective
2. Valuation Date
3. Purpose
4. Definition of Value
5. Premise of Value
6. Nature of the business
7. Descriptions of the assets
8. Trends in markets served
9. Information used
10. Evidence for assumptions adopted
11. Detailed analyses
12. Supportable conclusion

The objective states the question that the valuation conclusion is to answer, while the purpose describes who is going to rely on the document and for what decision-making process. Third-party users should pay close attention to the stated purpose; if they wish to use the report for something different, the conclusion may not be suitable because the Definition and Premise of Value will affect them. Users also need to pay careful attention to the Valuation Date; this is especially true for assets, where technological obsolescence may change values substantially within a relatively short period.

Descriptions of the Assets

The descriptions of the assets should include all relevant information; e.g. for machines: the make, model, serial number, date of purchase (if known), identifiable condition and location, as well as actual configuration and physical characteristics. This information is generally available from the property listings, purchase orders, invoices, upgrade records and maintenance documents, but should always be verified by a physical inspection. Different types of equipment, such as electric motors or desktop computers, may be sold separately, in bulk, or in a secondary market. If the valuation situation is other than "as is, where is", this should be discussed in the report.

Income Approach for Distressed Companies

The Income Approach measures the present worth of anticipated future economic benefits reflected as Net Income or Cash Flows; those are projected over an appropriate period.

Capital Cash Flows Method

We recommend using the Capital Cash Flows ("CCF") method to value distressed companies; this measures the cash available to both creditors and stockholders, includes the benefits of interest and other tax shields and applies a Discount Rate suitable for a firm totally financed by equity with the same risks. Mathematically it is equivalent to discounting the Free Cash Flows by the weighted average cost of capital ("WACC"). This is more suitable, as the capital structures of distressed companies generally change significantly during the forecast period. However, the CCF method is easier to implement because WACC would have to be recalculated each quarter; it is also better suited for the complicated tax situations of entities in bankruptcy.

For the projected period, Capital Cash Flows are:

Net Income + cash flow adjustments += cash and non-cash interest

Cash Flow adjustments include depreciation, amortization, deferred taxes, benefits of Net Operating Loss carry-forwards ("NOLs") and after-tax proceeds from asset sales, less working capital requirements and capital investments. It is based on Net Income to utilize management's estimates of future tax payments.

The CCF method discounts all Cash Flows including projected tax shields at the before-tax cost of assets, in contrast to the Adjusted Present Value ("APV") method, which generally discounts tax shields at the cost of short term funding. In effect, it assumes that debt is maintained as a fixed portion of value, so that interest tax shields have the same risk as the firm.

Terminal Value – First Segment

The Terminal Value assumes the Capital Cash Flows grow at a constant rate in perpetuity, starting with the last year of the projections. Many distressed companies will have unused NOLs, which at some point expire. Therefore we establish the Terminal Value in two segments: the first extends the projected Net Income at a constant rate until the NOLs are used up. During this period, Capital Cash Flows are:

EBIT - estimated corporate tax [(EBIT - interest) * (combined federal and state tax rate] + cash flow adjustments + tax shield due to NOLs.

The use of NOLs by the reorganized company is limited by the IRC ("Section 382 limitation") when the firm experiences an ownership change, which occurs when any group of 5% of shareholders collectively increases its total ownership percentage by more than 50%. The amount of the NOL that can be used each year after the change of ownership equals the Fair Market Value of the reorganized company's equity multiplied by the "long-term tax-exempt rate" published by the IRS.

A firm in Chapter 11 can avoid this limitation (the "bankruptcy exception"), if old shareholders and historic creditors hold more than 50% of the reorganized firm's shares. However, if there is an ownership change within two years after exiting from Chapter 11, the remaining NOLs are lost. Therefore some plans prevent such an event by limiting transfers of shares following reorganization.

Because of the potential loss of NOLs due to a future ownership change, the debtor may choose the Section 382 limitation rather than the bankruptcy exception. The annual amount of NOLs used can be estimated as the minimum of pre-tax income, the projected Section 382 limitation, and the remaining NOLs; the tax shield due to the NOLs is this number multiplied by the marginal tax rate.

Terminal Value – Second Segment

The second segment of our Terminal Value is the present value in perpetuity of the Capital Cash Flow in the year following the extended projected period, which do not include any NOL benefits. During this and thereafter, a growth rate of 3% to 4% in Net Income is used based on that expected for nominal GDP.

When not explicitly stated in the disclosure statement, we recommend a federal marginal tax rate expected to be in effect at the time of the transaction, and a State tax rate of 5%.

When applying the Income Approach to value individual assets, their remaining useful life plays an essential role, as this is the period over which the royalties or Cash Flows will be discounted.

Other Approaches for Distressed Companies

The Market Approach

The Market Approach assumes that a prudent investor can purchase assets that provide a similar output. It is applied in the used equipment market by comparisons with sales of similar items near the Valuation Date to arrive at an indication of the most probable selling price of the particular item.

<u>Comparable Company Multiples</u>

A value of the entity can be established by applying a multiple to the EBITDA of the first projected year; for this we suggest the median ratio of Total Enterprise Value to EBITDA for firms in the same industry defined by the four-digit SIC code. If EBITDA is negative in the first year, then the initial positive projected EBITDA should be used; the implied value should be discounted back to the Valuation Date at an equity rate of return. If the first forecast period is less than a year, EBITDA should be annualized along the seasonal pattern of the industry; if there are less than five firms in the industry group, expand it by using a three digit SIC code.

This method assumes that, on average, the industry comparables match the distressed company's growth and risk. Projected EBITDA could be temporarily low after bankruptcy, thus understating their long-run growth prospects. We prefer the Income Approach, as the multi-year Cash Flow projections used in the Capital Cash Flows incorporate all expected post-bankruptcy changes in performance.

Cost Approach

This is based on the principle of substitution; a prudent investor will pay no more for an asset than the amount for which he could replace it. The applicable definition is Replacement Cost, which contemplates recreating the functionality or utility of the asset, even if its form or appearance may be very different from the original.

The Cost Approach estimates Replacement Cost, new, and then deducts the various elements, including physical depreciation, functional deterioration and technical obsolescence, to arrive at "Depreciated Replacement Cost", which gives the maximum price a buyer would pay.

Data Required

Each approach has different requirements for evidence. The Income Approach mandates the applicable income and expense facts relating to the use of the assets as well as suitable Discount

Rates. The Market Approach needs comparable sales data on or near the Valuation Date; the Cost Approach relies on data for the expenditures to create a new asset.

Of those, the Market Approach is commonly used for individual assets in bankruptcy procedures; it assumes willing buyers, unrestricted access to relevant information, and adequate, reliable data regarding comparable, arm's length transactions. In applying it, the valuation analyst should consider the likely buyers for the assets, the appropriate market, and the purchaser's motivations.

Fair Market Value generally assumes numerous willing buyers and sellers, and enough product to satisfy market demand. With a number of transactions, the mean or median price will form the most likely amount. Market conditions at the Valuation Date should be described in detail in the report as well as the effect of subsequent changes. In some circumstances, for whatever reasons, the parties may be more interested in the highest, rather than the most probable price; if so, this must be clearly stated.

Distinctive Market Features

For most assets, for depreciation purposes, the age is the period during which it has been in use, but with certain items, such as computers, participants ignore the physical age of the particular unit: two models with the same configuration, one purchased new in 2000 and the other in 2003, are treated as if they are effectively the same, and their depreciable age is the time since they were first sold. In others, such as electric motors, the key is hours of use.

For depreciating computers, the unit's characteristics are more relevant than age; for desk top systems, these include processor, speed, hard drive size and memory, all of which affect performance. Each asset category has its own set of variables that determines its technology class.

Verification of Evidence

An estimate of value is not a guess, but is based upon and supported by evidence from markets and other sources. NACVA professional standards require the valuation analyst to collect, verify, analyze, and reconcile all pertinent information; he must not allow time deadlines or budgetary constraints to limit the extent of his research nor exclude any information or procedures that might be relevant.

Actual sales transactions from a market are the best evidence of values; they represent historic facts, and the valuation analyst need only verify the authenticity of price, date, location, condition, market level (end-user, wholesale or liquidation), special terms if any, and arm's-length nature. Indirect, anecdotal, or hearsay evidence, while somewhat removed from the real-world of buyers and sellers, may be useful, although less reliable. When it is necessary to consider such secondary evidence, the valuation analyst has a greater burden to "test the accuracy or exactness" of the facts.

For example, when amounts from price guides or catalogues are used as evidence, the valuation analyst should confirm that the published figures are based on actual arm's length transactions, establish the number of sales which took place at that price, determine the time in which they occurred, and verify how they were collected. If they cannot be independently verified, this must be disclosed in the Valuation Report.

The Valuation Report

The Valuation Report and the analyses it contains for bankruptcy purposes is very important. If the court cannot follow its logic, or considers the results not credible, it will not accept it. Bankruptcy Valuation Reports are covered by USPAP, which addresses their content and the level of information required, but does not specify a particular format.

The written report must contain sufficient information to be comprehensible to the intended users and explicitly disclose all assumptions, hypothetical or limiting conditions, and indicate their impact on value.

In a bankruptcy environment, users of the Valuation Report are generally less interested in a theoretical buyer and seller than in the actual expected selling price for the entity or assets. Anyone functioning as an expert in such circumstances should understand that his conclusions may need to be transactional rather than notional, as the assets could quickly be placed on the market and sold. The expertise of the valuation analyst is clearly demonstrated when results of sales are compared with the values indicated.

This point is illustrated by the high standard deviation in the following comparisons of the valuation errors between the estimated reorganization TEVs of 63 firms that came out of Chapter 11 between 1984 and 1993 with those subsequently established by the market:

	Valuation Method		
Factor	**Discounted Cash Flow %**	**Comparable Company %**	**Fresh Start %**
Median	-0.6	4.7	-3.2
Mean	-9.1	-10.4	-4.7
Standard deviation	54.6	79.4	23.4
Sample size	63	62	28

The valuation error is the natural log of the ratio (estimated TEV value/market TEV). "Estimated TEV" is the firm's total enterprise value based on the reorganization plan using two approaches: "Market TEV" is the sum of the market values of the common stock and warrants distributed plus the face amounts of debt and preferred stock. The Discounted Cash Flow values assume a Terminal Value growth rate of 4% and a market risk premium of 7.4%.

Comparable company values use the EBITDA for the first year of the Financial Projections in the official disclosures and the average multiple for all firms on Compustat with the same four digit SIC codes. Fresh start values are based on the pro forma Balance Sheets for the reorganized companies.

Subsequent Events

Unlike in other valuation situations, bankruptcy courts frequently and repeatedly permit facts and circumstances occurring or discovered after the petition to be applied to determine the debtor's going concern or death bed status. The courts may "consider information originating subsequent to the transfer date if it tends to shed light on a fair and accurate assessment of the asset or liability as of the relevant date." [In re Sunset Sales, Inc. 220 B.R.1005, 1016 (B.A.P. CA-10, 1998)].

Bankruptcy Code Provisions

The major areas in which valuation issues arise in bankruptcy are:

- Entities in Chapter 11
- Determination of Secured Status under Section 506
- Preferences under Section 547
- Fraudulent Transfer under Section 548.

Valuations of an Entity in Chapter 11

Many valuations in a Chapter 11 situation are "normal" and follow "normal" standards. They include those for the purpose of obtaining credit, and the sale of an operating division or subsidiary and should be on a going concern or fair market basis, if possible.

The items to be valued and why must be laid out for the valuation analyst; necessary information about the business, the industry, the economy (both national and local), the competition, etc. has to be obtained and different methods considered. In other words, the same steps should be taken as in every other valuation; however, the conclusions may well be different.

Determination of Secured Status - Bankruptcy Code Section 506

Most lenders go to great lengths to insure that the collateral for their loans is greater than the debt; there are times and circumstances when this is not so, if, for example, a major receivable turns out to be non-collectible, inventory is overstated, or there is a pollution problem. In a dispute as to the collateral's value, a valuation analyst is usually asked to determine the actual situation; when appropriate, he should obtain specialized assistance.

Reasons for Differences from Tax Practices

Depending on the purpose, a business enterprise will have different values at the same time. Some practitioners believe that bankruptcy valuations are similar to those for tax purposes, since both sets of laws address similar concepts of value. However, the codes, regulations and court decisions are different, and analyses under one set are not transferable to the other. While the goal of tax law is to see that governments collect the proper revenue, bankruptcy courts aim to achieve an equitable solution to financial difficulties between the parties.

There are several reasons for the divergences, the major one being that the U.S.C. has not changed greatly since it was enacted by Congress, while politicians frequently tinker with the IRC. Tax dominates our profession because of the sheer volume of cases, but in bankruptcy issues, different judges have interpreted the rules differently. In addition, the goals for the valuations are very different. While Emerson surely neither had tax nor valuation in mind, he so succinctly wrote in 1841: "With consistency a great soul has simply nothing to do."

While tax cases only deal with two players, a taxpayer and the IRS, both with well understood motives, bankruptcy cases generally involve a Trustee as well as the debtor, and various classes of creditors and stockholders. All have separate interests and different aims for the valuation.

In at least one case discussed later, Lawson v Ford Motor Company [In re Roblin Industries Inc., 78 F.3d 30 (CA-2, 1996)], a creditor, trying to demonstrate a debtor was solvent when it made a payment, relied on the valuation the debtor had prepared for its bankruptcy petition. However, the Trustee adopted the valuation in the debtor's SEC Registration Statement to show that it was then insolvent. It is therefore essential when preparing a valuation to consider not only why it is being undertaken, but also for which other purposes it may subsequently be used.

<u>Definitions</u>

The concepts of "value" and "fair value" in bankruptcy may have nothing to do with "Fair Market Value" for tax purposes, nor with the terms as used for other objectives. In particular, fair value in bankruptcy means neither that under SFAS 141 for financial accounting, nor is it the same as the Book Value shown on the Financial Statements, although the latter may serve as an indicative amount in the absence of other evidence.

Fair Market Value is usually defined based on Revenue Ruling 59-60 as:

> "The most probable price that a property should bring in a competitive and open market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus."

Implicit in this is a sale as of a specified date and the passing of title under conditions whereby:

1. Buyer and seller are similarly motivated
2. Both parties are well informed or well advised, and acting in what they consider their best interests
3. A reasonable time is allowed for exposure on the open market
4. Payment is made in cash or comparable financial arrangements
5. The price represents the normal consideration for the property sold and is unaffected by special or creative financing or concessions granted by anyone associated with the sale.

Orderly Liquidation Value has not been judicially defined, but has traditionally been considered to be:

> "The most likely price, expressed in terms of money, realizable in a market in which similar property is regularly sold to willing buyers, with time constraints, the seller being compelled to sell, given a specific period to sell, but in an orderly and advertised manner, 'as is, where is', with the buyer being responsible for removal costs."

Forced Sale value again is not defined but customarily has been:

> "The most likely price, expressed in terms of money, realizable in a market in which similar property is regularly sold for immediate cash to willing buyers, within a very limited time, as of a specific date, with the seller being compelled to sell with the sense of immediacy, on an 'as is, where is' basis with no warranty implied or expressed, and the buyer being responsible for removal costs."

Preferences under Section 547

U.S.C. Section 547 deals with what are commonly called preferences. The concern is that some creditors might be favored over others immediately before the bankruptcy filing. Preference may be the result of accidental timing, some getting paid and some not, depending on the schedule of checks released, or deliberate actions by the debtor.

To be fair to all creditors, Section 547 allows the Trustee or a Debtor-in-Possession to avoid (recover) any transfer of a debtor's interest in property that meets five conditions. Of these, the one that is most frequently invoked is that the debtor was insolvent at the time. Section 550 then allows the Trustee to recover the amount directly from the recipient or a beneficiary; creditors that received payment and do not want to return it have only one defense: the assertion that the debtor was solvent at the time.

Section 547(b) presumes a debtor is insolvent for transfers made within 90 days of filing for bankruptcy. The period is extended to one year for transactions with insiders. This presumption may be rebutted by the recipient. Once this is done, the burden of proof shifts to the Trustee or Debtor-in-Possession to prove insolvency by a preponderance of the evidence. If the creditor can show that the debtor was solvent when the transfer was made, it may retain it. This is well illustrated in Lawson v Ford Motor Co. [In re Roblin Industries Inc., 78 F.3d 30(CA-2, 1996)].

<u>Valuations and Preferences</u>

This case illustrates both the importance of valuations in the bankruptcy context and the application of Section 547. The valuation issue was whether Roblin Industries, Inc. (the "Debtor") was insolvent or not when it made a transfer to Ford, from which it bought scrap metal. In 1984, it had fallen behind in its payments, and entered into an agreement to pay Ford, which continued to ship scrap, $50,000 per month on an open account, plus interest at 10% per year.

In July 1985, the Debtor filed under Chapter 11; the Trustee (Lawson) sued Ford to recover a payment of approximately $53,000 made in April 1983. Ford claimed that the Debtor was not insolvent at that time, based on the statement of assets and liabilities filed with the bankruptcy petition, which showed a Net Worth of almost $4 million. Although the statements were not prepared by the Debtor's accountant but by its counsel, they were sufficient to overcome the 90-day presumption.

However, the Trustee argued that the statements did not reflect the Debtor's true value. He pointed to the SEC Registration Statement, which indicated the Debtor had a negative Net Worth of over $9 million, was operating in a depressed industry, and had been incurring large losses since 1979. Many figures in the Registration Statement represented Book Values, which the court acknowledged were not ordinarily indicative of market values. Still, it was willing to consider these amounts, because the statements prepared by the Debtor contained values based on several conflicting appraisals made at different times, and it had been shown that some asset values were overstated. The attorney who prepared them agreed it was "impossible to gauge how well-founded those values [were]." The court decided that the Debtor's Financial Statements, on which Ford had relied in arguing that it should keep the payment, were not an indication of its solvency and held for the Trustee.

Although the Debtor may have done a poor job of valuing assets and liabilities, it used those figures for the bankruptcy petition and not necessarily to establish its solvency. While Ford wanted to keep the payment, it apparently did not have any accounting or valuation professionals verify the Debtor's solvency when the payment agreement was made; in hindsight, that was unwise.

Fraudulent Transfers under Section 548

Section 548 deals with transfers of properties or obligations created in the year before the filing; its purpose is to allow the Trustee to recover amounts transferred that were either actually or constructively fraudulent. The intent is to prevent anyone from benefitting from an action by the debtor immediately before filing for bankruptcy.

Two types of fraud, actual and constructive, are addressed. Actual fraud, defined in Section 548(a)(1)(A), deals with "intent to hinder, delay, or defraud"; this is a legal matter outside the scope of this presentation. Section 548(a)(1)(B) involves constructive fraud. This occurs when a transaction is made in which the debtor does not receive "reasonably equivalent value" (discussed later) and is insolvent at the time of the transaction, which can be either an actual transfer by the debtor, or an obligation it incurred.

One difference between Sections 547 and 548 is that under Section 547 insolvency is presumed, and the opposing party must offer evidence that this is not so before the presumption is rebutted. Under Section 548, there is no presumption of insolvency.

Enforcement

Section 550 is the enforcement provision; this allows the Trustee to recover the value of the transfers defined in Section 547 or 548. The provision is quite broad; it enables recovery not only from the immediate recipient, but also from any party who benefits from the transfer or subsequent transfers.

Determination of Solvency

While there are other factors involved, the clear intent of Sections 547 and 548 is to prevent favorable treatment or fraudulent transactions after an entity becomes insolvent, but has not yet filed for bankruptcy. Congress recognized that insolvency could occur well before the actual filing.

The concept of value is crucial in determining if a debtor is solvent. As a starting point, the Code provides a specific definition of solvency, as stated in "Lawson v Ford:

> "'Insolvent' is defined by the Code as a "financial condition such that the sum of [the] entity's debts is greater than all of [the] entity's property, at a fair valuation ...." 11 U.S.C. Section 103(32). Fair value, in the context of a going concern, is determined by the fair market price of the debtor's assets that could be obtained if sold in a prudent manner within a reasonable period of time to pay the debtor's debts."

While not so stated, the profession has generally assumed that "fair market price" is the same as Fair Market Value.

Unfortunately, this starting point is not very helpful. No specific formulas are provided, there are no descriptions of "prudent manner" or "reasonable period of time"; therefore the establishment of

Fair Value must depend on the facts and circumstances of each case. Again, the court in Lawson v Ford:

> "The matrix within which questions of solvency and valuation exist in bankruptcy demand that there be no rigid approach taken to the subject. Because the value of property varies with time and circumstances, the finder of fact must be free to arrive at the "fair valuation" defined in Section 103(32) by the most appropriate means."

Balance Sheet Test

The concept of fair value for determining solvency or insolvency in bankruptcy related issues has become known as the "Balance Sheet Test", as this is the only document considered in determining questions of value. If the total of all available assets is greater than that of the liabilities, the entity is deemed solvent. This Balance Sheet Test also assumes that the debtor is a going concern. As a result, the values are not based on liquidation on the Valuation Date or in a Forced Sale. There is also the Cash Flow concept of solvency previously discussed, which determines if the entity is likely to generate sufficient future Cash Flow so that it can be reasonably expected it will be able to meet its near term cash obligations as they come due.

Insolvency can exist even though the company continues to function as an operating entity. It may manufacture, produce, sell, service, collect receivables, build inventory and pay its debts, but still be insolvent. An entity does not have to file for bankruptcy merely because it is insolvent.

Fair Valuation of Assets

Fair valuation in the context of solvency presents the valuation analyst with several problems. The first is to understand the time frame in which the assets are to be realized. The valuation is at a specific moment, the date on which a preference or fraudulent transfer took place. However, for a going concern, the Balance Sheet Test is an exercise in orderly liquidation, the amounts the firm would realize on its assets if it sold them in an orderly process over an appropriate period. While courts can use language like "in a prudent manner within a reasonable period of time," the valuation analyst must translate these vague guidelines into specific figures and time frames.

The first major difference between tax and bankruptcy valuations revolves around the concepts of the "willing buyer/willing seller"; tax valuators consider the entity as a whole, while those for bankruptcies examine each individual asset and apply the "willing buyer" concept at that level.

Not Forced or Bulk Sale Value

The Balance Sheet Test for a going concern is not a forced liquidation analysis, and does not determine the value of the assets as if they were sold in a block on the specific date. The accounts receivable are not valued as if sold to a factor, nor the inventory as if disposed of in bulk. Machinery, equipment and real estate is not valued as if it was to be auctioned off.

Reasonable Period

The question of what is a reasonable period, or if there are limits at all, arose in Travellers International AG v Trans World Airlines, Inc. [134 F.3d 188 (CA-3, 1998)]. In October 1991, Travellers won a judgment against TWA, which in November obtained a stay of enforcement by depositing $13.7 million with the court. Eighty-eight days later, it petitioned for bankruptcy. Subsequently, TWA sought to recover their deposit as an avoidable preference under Section 547(b).

In Bankruptcy Court, [In Re Trans World Airlines, Inc. 180 Bkrptcy Rpts.389 (Bankr DC Del., 1994)], the issue centered around whether or not TWA was insolvent when the disputed transfer was made. Travellers concluded that TWA's assets had a value of $5,298 million, while TWA argued for a value of $2,561 million.

One reason for this difference was that Travellers asserted that the Fair Value of the assets was to be determined under the assumption that there was no time constraint for their sale and liquidation. TWA's position was that their Fair Value should be based on a hypothetical sale within a reasonable period, which it claimed was twelve to eighteen months.

When the case reached the appellate level, time frame and constraints, if any, for valuing the assets were the paramount issues. In reaching its conclusion, the court made the following comments and observations:

1. Because TWA was not in a liquidation mode, it was to be valued as a going concern.
2. Past cases caused the court to look at the assets on a "market basis" as opposed to their value in a "distress situation". This requires considering the amount that could be realized from sales in a reasonable time under the "willing buyer/ willing seller" concept.
3. The sum realized from the sale of an asset is a function of the time available to sell it: the longer one has, the greater the value. In attempting to quantify this period, the court stated it should not be so short that the value is substantially impaired, and not so long that a creditor would suffer time-value-of-money and other losses.

The court concluded that the requirement for the assets to be valued on a going concern basis need not be at a single point in time, which, however, does not mean there is an unlimited period in which to effect the process; with respect to TWA, twelve to eighteen months was reasonable. While strictly speaking, this time frame applies only in that case, the court's logic has been applied to other situations.

Fair Value of Liabilities

One area in which there can be major divergences between tax and bankruptcy valuations is in the values of the liabilities. These are rarely an issue in tax or most other valuations, but may be important in bankruptcies. The statutory definition of insolvency is that the "entity's debts are greater than all of such entity's property at a fair valuation" [11 U.S.C. Section 101(32)]. A significant question is if the modifier "fair valuation" refers to both the property and the debts, or just to the property. This is important because in some situations the Fair Value of the debt may be substantially different from its face amount, and this difference may well determine solvency.

The distinction is particularly acute for interest-bearing debt of a public corporation, where it is highly unusual for its market value to be equal to the face amount. There are two reasons for this: credit conditions and interest rates. To the extent that the credit quality of the issuer changes, either positively or negatively, from that at the time of issue, the market value moves downward when credit quality declines.

Interest rate changes affect the value of debt when the rate is fixed rather than variable. Increases in interest rates push down the market value while rate declines raise it. Since interest rates practically fluctuate daily, it is highly unlikely that any publicly traded debt will sell for par.

Because TWA's public debt was selling far below its face amounts, all the courts - bankruptcy, district, and appellate - had to address its value. Travellers, whose position was to support solvency, argued that the market value of the debt should be used, based on the premise that the term "fair valuation" modified both assets and liabilities. TWA, which claimed to be insolvent, argued that the fair valuation doctrine only applied to assets, and that the debts should be valued at their face amounts.

With three levels of courts involved, as one might expect, three different opinions were issued. The Bankruptcy Court concluded that the phrase "fair valuation" applied only to assets and not to liabilities. It was concerned that using market value for public debt would create a disparity between the treatment of public and private companies, because no public markets, and hence no market prices, exist for private debt.

On appeal, the district court disagreed; its reading was that fair valuation applied to both assets and liabilities. For that reason it remanded the case to the Bankruptcy Court with instructions to value TWA's debt accordingly. As that decision was based on a prior Third Circuit case [Mellon Bank N.A. v Metro Communications, Inc. 945 F.2d 635 (CA-3, 1991)], it was only natural for that body to jump into the fray.
The Third Circuit avoided having to determine if fair valuation modified both assets and liabilities or just assets. Instead, it relied on the going concern concept for its decision. It opined that, because TWA was a going concern, it must use the face amount rather than the market value of its debt in the insolvency calculation.

> "Because we treat TWA as a going concern, we cannot consider the market's devaluation of TWA's debt resulting from the possibility as of the date of the transfer that TWA would

> cease operations and be unable to satisfy its promise. It is this devaluation that creates the difference between the face value figure urged by TWA, and the market value figure Travellers would have us adopt..... Thus even accepting the dictum in Metro Communications stating that we must fairly value liabilities, see 945 F.2d at 648, in this context we do not interpret the term 'fair valuation' to mean fair market valuation."

A more cogent explanation was given in a footnote:

> "As the bankruptcy court noted, anomalous results would occur if we allowed liabilities to be valued based on the debtor's financial position. If holders of claims are fully informed of the debtor's affairs and the asset values are less than the face amount of the claims, they would never value their claims at more than the value of the assets. Likewise, the fully informed debtor would never be willing to pay claimants more than claimants would be willing to take. Thus, the value of the claims would never exceed the value of the assets and insolvency could never occur."

Here the court is on stronger ground. By definition, the Fair Market Value of liabilities would never exceed that of the assets, because no willing buyer would pay more than the collateral behind those liabilities. Essentially, the Fair Market Value of the equity cannot be negative, which would be the case if that of liabilities did not adjust downward to reflect the entity's financial situation. Since the Code clearly allows for insolvency in a going concern, the liabilities cannot be valued based solely on the financial condition of the company.

This assumes that the only cause of a decline in the market value of the labilities is the creditworthiness of the entity. However, fixed rate debt declines in value when the current rates are above those of the debt. It is therefore appropriate to take the current situation into account. If management had the foresight to lock in lower-than-current-market interest rates, this increases the company's value.

It may be difficult to establish the impact of interest rate changes on the value of a particular security; although an increase in interest rates will depress the value of the debt and a decrease may cause its price to rise, the relationships are not linear. While the TWA litigation involved reducing the value of liabilities from their face amounts, a situation could arise in which the valuation analyst would have to decide if he should increase their value from the face amounts for outstanding high coupon "junk" bonds.

Another question involves the time frame for valuing debt. If assets are valued as though they are liquidated over twelve to eighteen months, should liabilities be accorded a similar treatment? If so, does this require the valuation analyst to add interest rate forecasting to his skills? A crystal ball may come in handy.

Unfortunately there are no real rules: different jurisdictions have their own viewpoints and have created separate definitions; always discuss this with counsel and read the relevant cases. Debt that was originally issued at a discount, should be valued at the issue price plus amortization of the discount, while publicly traded debt should be valued at its face amount, both adjusted for changes in interest rates from those at the date of issue. If such information is not available, bankruptcy courts may allow use of a proxy date for the determination of insolvency.

Contingent Liabilities

Recorded liabilities, such as interest-bearing debt or accounts payable, are stated at face amounts on the Balance Sheet. The entity may have other liabilities, such as guarantees, disputed claims, pending litigation, product warranties, tax disputes, taxes due on the dispositions of assets and other claims of a contingent nature that are real obligations. Obviously, their values may make the difference between a finding of solvency or insolvency, or even a fraudulent transfer. Therefore valuations concerning solvency give recognition to all contingent liabilities.

The Eighth Circuit in FDIC (Federal Deposit Insurance Corporation) v Bell, [106 F.3d 258 (CA.8, 1997)], cited the standard definition of a contingent liability as:

> "One which is not now fixed and absolute, but which will become so in case of the occurrence of some future and uncertain event. A potential liability, e.g. pending lawsuit, disputed claim, judgment being appealed, possible tax deficiency....."

<u>Valuing Contingencies</u>

There are three ways to value a contingent liability: nothing, the full amount, or somewhere in between. Courts have emphatically rejected the full amount as:

> ".... absurd; it would mean that every individual or firm that had contingent liabilities greater than his or its net assets was insolvent - something no one believes. Every firm that is being sued or that may be sued, every individual who has signed an accommodation note, every bank that has issued a letter of credit, has a contingent liability.... There is a compelling reason not to value contingent liabilities on the Balance Sheet at their face amounts, even if that would be possible to do because the liability, despite being contingent, is for a specified amount (that is, even if there is no uncertainty about what the firm will owe if the contingency materializes). By definition, a contingent liability is not certain - and often is highly unlikely - ever to become an actual liability. [In re Xonics Photochemical Inc. 841 F.2d 198 (CA-7, 1988)]."

Totally omitting a contingency is equally absurd if there is any likelihood of it becoming real, which leaves "somewhere in between". The most usual solution is to value each contingent liability at its face amount multiplied by the probability that it would occur; this leads to a statistically established "expected value" [Covey v Commercial National Bank, 960 F.2d 657 (CA-7, 1992)] and [In re Merkel, 192 F3rd 844, 84 AFTR2d 99-61119 (CA-9, 1999)]. The valuation analyst must examine the particular facts and circumstances surrounding the event and reach a supportable conclusion as to the likelihood of it occurring and "the debtor having to stand good for the debt".

Effect on Solvency

The value of contingent liabilities may make the difference between solvency or insolvency and a finding of a fraudulent conveyance. FDIC v Bell [192 F. 3d 844, 84 AFT R2d 99-6119 (CA-9, 1999)] hinged on whether or not a contingent liability of $1.85 million was to be considered in determining if there had been a fraudulent transfer. Melvyn Bell and his wife, Darlene, divorced; under State law there was supposed to be an equal division of property. However, based on valuation schedules at the time, the wife received $1,408,000 more than the husband.

As it turned out, Melvyn had defaulted on loans that ultimately became the property of the FDIC; because he was insolvent at the divorce settlement, the FDIC argued that the transfer of $1,408,000 was a fraudulent conveyance and that it was entitled to recover at least half that amount from the wife, who objected.

Her basis was that one asset she received, Red Apple Enterprises, had a contingent liability of $1,850,000. Unfortunately, this had not been disclosed in the settlement and she had testified to believing the valuation, without the contingent liability, to be "pretty accurate." No evidence as to the nature of the contingent claim was offered in district court, nor any analyses with respect to its probability of occurrence.

As a result of the lack of evidence, FDIC got a partial summary judgment. In denying a motion to reconsider, the court stated that:

> "The defendants have offered no new evidence to support the position that the contingent liability is not speculative. The defendants have not offered the notes themselves nor have they argued the terms of the notes."

On appeal, the Eighth Circuit upheld the judgment. It was sympathetic to the concept of valuing the contingent liability at expected value. However:

> "It was not merely imprudent for Darlene Bell and Bell Equities to fail to advance evidence to support their allegations; it was necessarily fatal to their defense. We do not allow a case to go forward to trial on the mere chance that a jury will disregard all evidence and accept the supported speculation of a party litigant."

Few courts have issued a stronger statement about the need for valuation analysts to turn argument into evidence.

Solvency and Cancellation-of-Debt-Income

Cancellation-of-debt ("COD") income in tax law depends on yet another definition of solvency. Generally, if a taxpayer is relieved of a debt, the gain is taxable income, as the proceeds were not included when received. IRC Section 108 specifically refers to inclusion of debt forgiveness as income when it occurs. However, there is an exception [Section 108 (a)(1)(B)] excluding COD income if the taxpayer is insolvent immediately before the forgiveness. Congress reasoned that one purpose of bankruptcy was to allow taxpayers to get a fresh start, and burdening them with a large tax liability from the relief granted by the bankruptcy would tend to defeat that objective.

Bankruptcy v Tax Definition

In Merkel [192 F.3d 844.84 AFTR2d 99-6119 (CA-9, 1999)], an appeal court faced the question of whether or not a contingent liability should be considered in determining if a group of taxpayers was insolvent when COD income was generated. They were general partners in an entity whose bank had forgiven a $1,439,000 loan, resulting in $360,000 of COD income. The taxpayers excluded it from their returns, claiming to be insolvent at the time of the loan forgiveness and qualified for the exception. Their solvency depended on personal guarantees they had made for a loan to Systems Leasing Corporation ("SLC").

Before the transaction that resulted in the COD income, SLC's bank had entered into a restructuring agreement, whereby it would not enforce the personal guarantees if neither SLC nor the guarantors filed for bankruptcy within 400 days. Before the restructuring, SLC had been in default and, had the agreement not been reached, the bank might have enforced the guarantees. After the restructuring, they became a contingent liability, dependent on whether or not any of the participants filed for bankruptcy in the following 400 days.

The IRS contended that the contingent liability should not be included, while the taxpayers cited many bankruptcy cases that held that a contingent liability was to be considered in a solvency determination and that the same reasoning should apply in a tax case.

The Ninth Circuit agreed with Covey v Commercial Nat'l Bank [966 F. 2d 657 (CA-7, 1992)] that a contingent liability should be discounted by the probability of its occurrence. The court, however, determined that the tax definition of insolvency differed from that of bankruptcy. It agreed that the phrase "fair valuation" modified both debt and property in the bankruptcy definition; however, it stated just as clearly that the tax definition did not apply Fair Market Value to liabilities:

"Unlike 11 U.S.C. Section 101 (32)(A), the phrase 'fair market value' in Section 108 (d)(3) modified 'assets' but not 'liabilities'. That Congress explicitly stated that 'assets' under 108 (d)(3) were to be valued at fair market value, and did not state the same as to liabilities, suggests that it did not intend liabilities to be valued at fair market value. Moreover, that Congress explicitly provided under 11 U.S.C. 101 (32)(A) that both 'debts' and 'property' were to be valued 'at a fair valuation' suggests that it knows how to provide for comparable treatment of liabilities and assets when that is what intends (sic) to do."

Since the taxpayers had failed to demonstrate that the contingent liability was likely to occur, it was not considered part of their Balance Sheets and they were judged solvent; the COD income was thus taxable.

Reasonably Equivalent Value

Individual transactions often come under scrutiny in a bankruptcy case, whereas tax valuations are more concerned with the entity as a whole. As previously discussed, in bankruptcy it is possible that the debtor either inadvertently or deliberately may make transfers that benefit one group of creditors over another.

U.S.C. Section 548 allows a Trustee to recover payments if the debtor was insolvent and received less than "reasonably equivalent value." Since a single transaction may involve a large sum, litigation often ensues when an entity has engaged in any transactions outside its ordinary course of business. The outcome may depend on the legal definition of "reasonably equivalent value" and the factual determination of whether it was actually received.

This is an issue that has been addressed many times by the courts with respect to whether or not it is the same as Fair Market Value. From a reading of the Code, it would not be unusual to think that the phrase means the same or at least a close approximation of it; however, this is not always so, according to the Supreme Court in BFP v Resolution Trust Corp. [511 U.S. 114 (1994)]. Basically the debtor attempted to overturn the sale of a house purchased in a California foreclosure. The price was $433,000 and the debtor argued that its Fair Market Value was over $725,000.

Since the Fair Market Value was greater, the situation appeared to be a near-perfect example of what Congress had intended in the fraudulent conveyance provisions. The debtor did not receive reasonably equivalent value, therefore the transfer was "avoidable" under Section 548, and the debtor should thus have been able to recover under Section 550. The debtor argued that it was not relevant that the sale was in a foreclosure, and cited the "Durrett Rule," in which the Fifth Circuit determined that any sale for less than 70% of fair value must be invalidated. [Durrett v Washington Nat. Ins. Co. 621 F. 2d 201 (CA-5, 1980)].

The Supreme Court rejected any arguments that would substitute Fair Market Value for reasonably equivalent value. It noted that the term Fair Market Value appears in the Code in Sections other than 548, and said that if Congress had wanted that to be the standard it would have said so.

Congress instead used what the Court said was the as far as they were aware "entirely novel phrase 'reasonably equivalent value'." Some legal commentators suspect that the majority was more driven by a desire to preserve States' Rights and their due process than to interpret valuation as contained in the Bankruptcy Code.

The Supreme Court concluded that reasonably equivalent value in a foreclosure case would not mean either Fair Market Value or "fair foreclosure price." Instead, "reasonably equivalent value" for foreclosed property is the price at which it is sold. The result was that if a property is disposed of in a process whereby all the requirements of a State's foreclosure laws are met, the transaction would satisfy Section 548 and the sale would not be a fraudulent conveyance.

The justices went on to say:

> "That reasonably equivalent value would continue to have a meaning outside the foreclosure process, and that meaning would be similar to 'fair market value'.

The Court also warned that a sale, which did not comply with all the requirements of a foreclosure, would violate Section 548.

Value of an Opportunity

In a Third Circuit case involving Intershoe, Inc., a large wholesaler of women's shoes, [Mellon Bank v Official Committee of Unsecured Creditors, In re R.M.L. Inc., 92 F.3d 139 (CA-5, 1990)], Intershoe had paid Mellon $515,000 to put together a loan syndicate. One condition of the financing was for Intershoe to obtain $15 million of equity. When those investors withdrew, Intershoe was forced into bankruptcy and the Creditors' Committee sued to recover the $515,000 as a fraudulent transfer under Section 548.

The amount consisted of four separate sums: the first $125,000 was a "good faith deposit"; the second $125,000 was another deposit. The third was $132,500 for a non-refundable "facility fee", and the fourth a $132,500 non-refundable agent's fee for the syndication. The Bankruptcy Court allowed Mellon to retain the first $125,000, but ordered the remainder returned to Intershoe. Ultimately the decision reached the Third Circuit. Mellon argued that its commitment letter provided reasonably equivalent value and that Intershoe had been solvent at the time.

In deciding the case, the court made several useful comments relating to bankruptcy values:

- Congress did not bother to define the phrase "reasonably equivalent value" and thus left that task to the courts. This lack of definition causes considerable difficulties, particularly in cases in which value is of an intangible nature, such as the opportunity to obtain economic value in the future.

- The court returned to an earlier case [Mellon Bank v Metro Communications], which established the principle that even though the subject company did not receive the loan, it did get the intangible benefit of the right to borrow money. This "has considerable value in the commercial world." The question became one of whether or not that "value" was reasonably equivalent to the fees paid to Mellon.
- Mellon's argument, that the Supreme Court in BFP v Resolution Trust meant that since it charged Fair Market Value for the fees, reasonably equivalent value must have been rendered, was rejected. The issue was not that the fees were the market cost of the services, but if the value received was reasonably equivalent.
- Value does not require that the contemplated transaction be successfully completed. As long as there was a reasonable chance that the investment would succeed, value was conferred; it is directly related to the likelihood that the event will happen. In this case, the value that Mellon conferred on Intershoe correlated directly with the probability that the loan would go forward.

The court concluded that while, in the abstract, a firm would receive value from a loan commitment, the cost must be measured against the likelihood that it would be funded. The conclusion was that so many restrictions had been placed on the funding that it was unlikely the loan would ever be made. Consequently, the transfer was voided under Section 548 and the creditors were able to recover $390,000 of the payments.

Relative Bargaining Strength of Competing (Senior versus Junior) Claimholders

As distributions under a plan of reorganization in Chapter 11 normally follow the relative priority rule, basing the plan on a higher value benefits junior classes through a larger pay-out on their claims; senior creditors usually press for lower amounts, as this means less risk to them. Junior and senior claimholders negotiate over the division of assets that have a fixed but unknown value. Any gain that either group eventually realizes as a result of the firm's true value being different from the plan's estimate must come at the expense of the other group.

Conflicts between senior and junior creditors have been increasingly acknowledged in financial press accounts of bankruptcy reorganizations, although a number of them assume that valuations are mostly lowballed:

> "Frequently, investors who specialize in buying the senior debt of bankrupt companies conspire to keep values low so that when a company emerges from bankruptcy proceedings, they get most of its value, including its stock. If the company has been undervalued, the market will send its shares soaring, and they make out like bandits."

National Gypsum Case

National Gypsum Company provides an example of the tension between junior and senior creditors. During its bankruptcy, vulture investors acquired a large fraction of its senior debt. The debtor's disclosure statement included Financial Projections for five years following the bankruptcy. They assumed that revenues would grow in years 1 to 3 and then decline in each of years 4 and 5, reflecting an anticipated recession in key markets. The official committee of unsecured creditors argued that the debtor's forecasts were overly pessimistic, grossly understating the firm's value, and proposed its own plan based on more optimistic projections.

The table below compares key items from the debtor's and creditors' sets of projections; differences are striking. In the final forecast year, projected revenues under the creditors' plan exceed the debtor's by $120.9 million (20% of the high amount); the difference in Capital Cash Flows is $62.8 million (88%).

Based on the creditors' projections, the DCF Value is $1,037 million, but only $183 million going by the debtor's figures. Immediately after the bankruptcy, the TEV was $464 million; this was (253%) of the debtor's value, 45% of the creditors', and 76% of the mean of $610 million.

The following table compares the competing Financial Projections. TEVs are calculated assuming a steady-state growth rate of 4% and an unlevered equity Discount Rate of 10.0%. Both sets were made in September 1992 and included estimated results for the remainder of the year, with the plan of reorganization becoming effective on December 31. The plan was actually confirmed on March 9, 1993 and became effective on July 1.

$'000 Financial Item	Actual 1991	Year of Projections Est 1992	Est 1993	Est 1994	Est 1995	Est 1996	Est 1997
1. Net Revenues - $'million							
Creditors	442.9	458.0	496.8	572.8	629.1	618.0	604.3
Debtor	442.9	450.8	477.4	520.9	561.3	521.7	483.4
Difference	-	7.2	19.4	51.9	67.8	96.3	120.9
2. Gross Margin - %							
Creditors	19.8	17.5	23.3	29.6	33.0	31.6	30.3
Debtor	19.8	21.2	24.3	28.5	31.5	29.9	28.1
Difference	-	(3.7)	(1.0)	1.1	1.5	1.7	2.2
3. Depreciation & Amortization - $'million							
Creditors	48.7	43.6	43.8	43.8	44.1	45.4	46.8
Debtor	48.7	43.6	32.9	34.1	35.4	37.2	38.7
Difference	-	-	10.9	9.7	8.7	8.2	8.1
4. Net Interest - $'million							
Creditors	0.7	0.7	38.0	37.9	34.7	31.9	29.8
Debtor	0.7	0.7	14.8	17.5	17.5	15.1	12.6
Difference	-	-	23.2	20.4	17.2	16.8	17.2
5. Capital Cash Flows - $'million							
Creditors			50.1	63.4	98.8	81.2	71.1
Debtor			20.0	29.1	40.4	23.3	8.3
Difference			30.1	34.3	58.4	57.9	62.8

Total Enterprise Value (Dec. 31, 1992) - $'million	
Creditors	1037
Debtor	183
Difference	854
Mean	610

Conclusion

While the valuation concepts discussed in this presentation are not new, valuations of distressed companies pose certain unique challenges, including familiarity with the Code and case law, knowledge of the special terminology and an in-depth analysis of the specific risks at the commencement of the engagement. The determination of, if a going concern or liquidation Premise of Value would be the most appropriate, is the essential first step; court precedent should be examined before reaching a conclusion.

Both tax and bankruptcy laws are involved with values, but analyses under one set are not likely to be transferable to the other. Congress and the courts have laid out different goals for each area, which result in varying conclusions. For example, the concept of Fair Market Value, integral to tax valuations, may not apply in bankruptcy work.

The range of services that deal with distressed companies is vast; it is up to the valuation analyst to seize the available opportunities.

PART IV – CASE STUDY

On April 30, 2003, Eagle Technologies, Inc. ("Eagle", or the "Company") engaged Corporate Valuation Services Limited ("CVS") to prepare an Asset Valuation Report, setting out Indications of Orderly Liquidation Values, as at March 31, 2003 (the "Valuation Date") of all its assets. At the Valuation Date, Eagle had Secured Loans in the amount of $252,000, and Convertible Debentures of $2,050,000. The purpose of the Asset Valuation Report was to supply information on its solvency.

Background

Eagle, registered in Delaware, has developed two sets of specialized information technologies. The major product, "Finder", is an enabling technology for the security and defense markets; it also sells a consumer line, "Locator", an add-on to allow hand held computers to give travel directions.

In 2002, the bulk (76%) of revenues arose from Locator, which can be attached to various brands of Personal Digital Assistance ("PDA") or installed in cars. During the first quarter of 2003, sales were below those of 2002, but a small gain was expected for the full year. Revenues from Finder were low, as Management devoted its major energies to improving the product, based on practical experience with the installations in 2002 at four Beta sites, and in arranging marketing partnerships with major aerospace and IT enterprises.

Financial Position

As shown in the Balance Sheets set out below, the Company is insolvent. Management has spent a year trying to raise additional capital. Due to a negative EBITDA of about $200,000 a month, they have been unsuccessful; to quote the CFO, "we have hit a brick wall; no more funds are available".

Some software development has been carried out by a wholly owned subsidiary in Israel. This is to be sold to its employees for $75,000 plus forgiveness of its loan of $148,506 to Eagle. The liquidation accruals are $208,432 for interest on the Secured Loans and Debentures, together with $103,000 for employee deductions. The result is a deficit of $314,126 on liquidation.

BALANCE SHEET - March 31, 2003

	Consolidated	Israel	Domestic	Liquidation
ASSETS CURRENT				
Cash	231,885	72,190	159,695	159,695
Receivables	835,799	3,798	832,001	465,129
Prepaids	446,990	4,925	442,065	18,391
GST Recovery	54,537	-	54,537	-
Inventories	256,295	-	256,295	70,421
	1,825,506	80,913	1,744,593	713,636
Equipment - net	365,632	41,677	323,955	117,650
Deferred Taxes	8,480	8,480	-	-
Shares of Israel	-	-	75,889	75,000
Core Technologies	-	-	-	1,111,000
Brand Name	-	-	-	180,000
Patents - net	10,906,205	-	10,906,205	74,000
	13,105,823	131,070	13,050,642	2,271,286
LIABILITIES CURRENT				
Payables	1,452,963	15,377	1,437,586	-
Accruals	2,139,847	2,012	2,137,835	311,432
Customer Deposits	35,127		35,127	-
Intercompany	-	(148,506)	148,506	-
Due to Employees	150,689	127,751	22,938	22,938
Taxes Due	58,547	58,547	-	-
	3,837,173	55,181	3,781,992	334,370
TERM				
Advances	33410	-	33,410	-
Secured Loans	150500	-	150,500	251,931
Debentures	2050000	-	2,050,000	2,050,000
Promissory Note	1360000	-	1,360,000	-
	7,431,083	55,181	7,375,902	2,636,301
EQUITY				
Share Capital	87,241,356	24	87,241,356	87,241,356
Retained Earnings	(81,566,616)	75,865	(81,566,616)	(87,606,371)
	5,674,740	75,889	5,674,740	(365,015)
	13,105,823	131,070	13,050,642	2,271,286

The Company

Eagle serves the security, defense and transportation markets. Their technologies are based on a Global Positioning System ("GPS"), giving information about an object's location, with hardware and software allowing the tracking, monitoring and control vital to managing vulnerable assets by means of a GPS device or cell phone. Various security systems, such as existing remote cameras, perimeter controls etc. and management systems may be integrated to create a real time security infrastructure, delivering knowledge of the whereabouts of major assets and personnel.

Business Model

The Company targets three distinct types of customers: homeland security/law enforcement organizations, defense forces and global enterprises; it relies on partners to obtain and service such customers, subsequently sharing revenues.

Market Opportunity

Security, in the past a not very significant expense for most enterprises, has increased dramatically and become an absolute and urgent necessity, especially as almost anything can be used as a weapon. Even if the liability is still unclear, no group wants their products used for such purposes. As a result, organizations around the world are scrambling to make security an urgent "must-have" item. In light of this, Eagle sees significant market opportunities for its assets.

Competitors

As in other fields, in the security and defense markets, products from several other companies can be combined to offer a specific solution. Competitors fall into two groups: fleet management providers and security/defense suppliers; major industry participants are:

- Fleet management providers - Axiom Navigation
- Security/defense suppliers - ALK Technologies/ Qualcom

While numerous other firms offer segments of Eagle's capabilities and a few partnerships supply full legacy versions, the Company's technologies are the easiest to customize.

Staff

At the Valuation Date, Eagle had 53 employees with a great deal of global experience in the software, navigation and telecommunication industries. Management consists of seasoned executives, trained engineers and computer scientists; it plans to hire experienced marketing specialists.

The Products

Eagle's technology consists of five product families using Finder:

- Security Control Server ("SCS") - Customizable Java server technology for managing the information flow between Mobile Intelligent Networked Devices ("MIND") and back-end systems. Existing applications, legacy systems, databases, map servers, ERP, CRM, etc. can quickly be integrated into the server.
- Control Applications - Customizable software applications that can be operated from a central site, mobile locations or via the Internet. They take information provided by the SCS and display it to the user via customized interfaces.
- Mobile Information Platform ("MIP") - Software that enables mobile devices, such as PDA (Personal Digital Assistants), smart phones and GPS-enabled laptops to become MINDS.

It can provide mobile devices with location-based applications, such as advanced navigation and messaging.

- MINDS - Customizable, wireless tracking devices that are connected to vehicles, other assets or individuals for the purpose of transmitting real-time information on their location to and from an SCS; they can use one or more communication networks at the same time.
- Software Development Kits ("SDKs") - These enable mobile devices to become a location platform which can be integrated with other applications and add mapping and navigation capabilities to compatible server-based material.

Tangible Assets

The Tangible Assets of Eagle were valued by CVS as classes; the process included a review and visual inspection of all identifiable individual items.

Receivables

The Company's receivables had the following reported aged balances:

Current	**31-60**	**61-90**	**Over 90**	**Total**
167,969	289,778	(31,153)	405,407	832,001

A detailed examination of all accounts showed that a large number would be difficult to collect even if the Company were to continue to operate, and impossible in an Orderly Liquidation. Four accounts had significant credit balances representing customer deposits, and a secured loan relating to factored receivables of $101,431 had been deducted. After discussions with Management, CVS considered that the present value of the collectable amounts was $465,129 (56% of Book Value).

Prepaids

Prepaids included expense advances to former managers, which were the subject of litigation. A detailed examination showed that only lease deposits of last month's rents and those with cellular telephone carriers could be realized on an Orderly Liquidation; the total of those was $18,391 (4% of Book Value).

Inventories

Eagle maintained inventories at three locations: its offices, at Duplium, a fulfilment house for Internet orders, and Span Manufacturing, which assembles its physical units. Management advised that, under its present contract, Span effectively could keep all components on its premises. A detailed review gave a total realizable amount of $70,421 (27% of Book Value), as follows:

	Book Values	Orderly Liquidation Values
Office	111,636	64,277
Duplium	39,651	6,144
	151,287	70,421
Span Manufacturing	105,088	-
	256,375	70,421

Furniture and Equipment

For furniture and equipment, no complete information was available, merely a schedule setting out ledger balances. CVS listed the major items, gave them a detailed examination and obtained prices from used furniture and computer dealers, as follows:

	NBV	OLV	% of NBV
Furniture	123,324	35,250	29%
Production Equipment	7,662	-	0%
Telecom Equipment	6,696	2,000	30%
Computer Software	9,500	-	with Hardware
Computer Equipment	181,754	80,400	44%
Leaseholds	36,696	-	0%
	365,632	117,650	32%

Intangible Assets

Eagle has three sets of Intangible Assets:

- Exclusive worldwide licensing rights to a Cellular Position Location Patent
- Finder (core technologies)
- Locator (brand name, patents, core technologies)

Cellular Position Location Patent

This US Patent was issued on August 27, 1991, and expires in 2010. Eagle's ownership covers all uses except criminal justice applications. A related patent has been granted in Australia and similar ones are pending in Japan and Canada. The Patent has several claims that provide for the identification of people or objects utilizing geographic information from satellite navigational signals (such as GPS) via a remote hand-held unit, transmitted over a cellular network to a base station capable of displaying the information.

Management believes that the Patent is particularly relevant to the provision of enhanced 911 services mandated by the FCC in the interest of public safety and security. It covers remote portable units and base stations in a system that combines three distinct technologies: satellite navigation, cellular telephony, and computerized mapping.

<u>Demand</u>

Worldwide, wireless usage is growing. In the US, 130 million cell phones are expected to be in service in 2003, and close to 175 million by 2005. Canada is envisaged to have 16.6 million this year, Japan 71 million (over half the population), and Australia 13 million (a 45% penetration). The FCC has mandated that by 2005, 95% of all cellular phones must be location-identifiable for 911 purposes.

<u>Value</u>

The Patent covers this capability, and in theory should generate considerable licensing revenues. However, no manufacturer of cell phones has been willing to voluntarily pay royalties; in order to collect any, there would have to be a successful test suit for infringement. The Company has spent over $100,000 trying to realize revenues, but has been unsuccessful; it was even unable to interest a law firm to act on a contingency basis in the case. Therefore, in our view, the value of the Patent is only nominal, mainly as a "trading card" to avoid potential suits for infringing other patents.

The original cost of the license for the Patent was $14,924,437, paid in cash and stock; at the Valuation Date, the Net Book Value was $10,882,401. As stated above, we believe its Orderly Liquidation Value is nominal; using 1% of the Net Book Value and allowing for 10% selling costs gives $48,971; rounded to $50,000, this amount was selected.

Finder

Currently, in Version 1.8, which was available for inspection, Finder is a scalable, open architecture server system designed to provide utmost security. It allows organizations to obtain real-time, location-based information on its infrastructure, so as to improve overall security and productivity of vital personnel and important assets.

It is designed to communicate bi-directionally with MINDS, using wireless networks. Those come in various forms and can function in a wide range of physical environments. The system is able to function simultaneously connected to multiple carriers. It is composed of a number of servers, each of which manages a particular role:

- InfoBus - The key to the system's architecture, this is licensed software that acts as Message Oriented Middleware; it connects many applications which manage and react to information that flows along the InfoBus.
- Database Server - Runs any commercial RDBMS (Relational Data Base Management System), usually with full replication for data recovery, or as a cluster for high availability.
- Map Server - A computer that contains the spatial datasets; it may be replaced by an external map provider.

- Web Server - Provides users access to various applications, such as Command and Control, Customer Care and Billing, Report Engines, etc.

Finder has been slow to take off commercially and has only four Beta installations. One kept track of debris being taken away from the World Trade Center in New York; another serves police vehicles in one State. No significant revenue was anticipated until late 2004 or early 2005, by which time all the existing Source Code will have to be rewritten and the software's scope expanded.

Value

The Source Code, which was inspected, is written in well commented Java, using XML (Extensible Markup Language) for communication. It is divided into four segments:

1. 26 components;
2. Two libraries that work with the components to handle activities;
3. Six reusable applications; certain specialized applications were written for some of the existing installations, but will not be used again;
4. 30 elements of tool and testing software.

As Management was unable to provide reasonable projections due to Finder's early stage of development, CVS established the Orderly Liquidation Value of the core technologies on a "build or buy" basis by looking at the Replacement Cost and discounting it. This was done by applying to the existing Source Code a cost of $9.17 per line, an average for Java in the applicable location.

	Lines of Code	**Replacement Cost $**
Components	64,052	587,357
Libraries	49,157	450,770
Applications	87,864	805,713
Tools	57,462	526,927
	258,535	2,370,767

Considering the lack of revenues, CVS believes the most likely buyers in an orderly liquidation would be one of the marketing partners, which, however, would require a substantial discount from the Replacement Cost. Looking at the difficulties of finding a buyer for such specific code in other cases, CVS has chosen discounts of between 55% and 70% and deducted standard selling costs of 10%.

Discount	**55%**	**60%**	**65%**	**70%**
OLV	960,160	853,476	746,791	640,107

After discussions with Management and the aerospace marketing partner, we selected a discount of 65%, rounding the figure to $750,000.

Locator

The Locator software has three valuable algorithms, for: Image Compression, Error Correction and Routing. CVS was not able to inspect the Source Code, which was in Israel. As Locator generates revenue, CVS has adopted the Relief from Royalties method to obtain its Orderly Liquidation Value using royalties of 4% to 5% and Discount Rates between 25% and 30% based on experience and the perceived risks.

Projected Revenues & value

Revenues were $1,360,000 in 2001, $3,450,000 in 2002 and $850,000 in the first quarter of 2003; annualized, this would be $3,400,000; however, a higher level was expected for the year, as version 3.0 was to be launched in the last quarter. From this CVS developed two scenarios:

$'000	**Success**	**Survival**
2003	4,450	4,300
2004	5,100	4,750
2005	5,800	5,200
2006	5,500	4,850
2007	4,675	4,120
2008	3,500	3,100
2009	2,450	2,150
2010	1,600	1,400
2011	1,000	850

Based on these, we created two matrixes:

			$'000
Discount Rate	**25.0%**	**27.5%**	**30.0%**
Success Scenario			
Royalty Rate			
4.00%	620	585	553
4.25%	659	621	587
4.50%	698	658	622
4.75%	737	694	656
5.00%	775	731	691
Survival Scenario			
Royalty Rate			
4.00%	565	533	504
4.25%	600	566	536
4.50%	635	600	567
4.75%	670	633	599
5.00%	706	666	630

The underlined figures were averaged to give amounts of $658,000 for the Success Scenario, and $600,000 for Survival. Deducting 10% for selling costs from the mean of $629,000 results in $566,100; rounded to $565,000, this represents the Orderly Liquidation Value.

The amount covers the patents, core technologies and brand name; the patents have a Book Value of $24,000, which seems reasonable for their Orderly Liquidation Value. The balance was allocated $180,000 (1/3) for the brand name and $361,000 (2/3) for the core technologies.

Summary of Intangible Asset Values

The Orderly Liquidation Values of the Intangible Assets are:

	$
Cellphone Patent	50,000
Finder (core technologies)	750,000
Locator Patents	24,000
Other Core Technologies	361,000
Brand Name	180,000
	1,365,000

Solvency Conclusions

As shown on the Balance Sheet, the aggregate Orderly Liquidation Values of all the assets of Eagle is $2,271,000. This is $365,000 less than its liabilities to the Secured Creditors and Debenture holders for the principal ($2,302,000) and accrued interest ($208,000), plus employee deductions.

Due to this shortfall, liquidation under Chapter 8 was undertaken, with all the Intangible Assets being purchased by a Newco for $1,440,000 and the current assets for $420,000, their Orderly Liquidation Values, less estimated adjustments for subsequent transactions. The secured creditors settled for the available cash and the Debenture holders received all the shares of Newco.

The marketing partners purchased $4 million of Debentures convertible into 60% of Newco, while Management received options on 16% of the stock for $500,000. Fully diluted ownership became:

	Contribution $'000	Shares %
Marketing Partners	4,000	60
Debenture holders	1,860	24
Management	500	16
	6,360	100