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*Published by:*
Chase Cambria Company (Publishing) Ltd
4 Winifred Close
Barnet, Arkley
Hertfordshire EN5 3LR
United Kingdom

*Annual Subscriptions:*
Subscription prices 2009 (6 issues)
Print or electronic access:
EUR 695.00 / USD 845.00 / GBP 495.00
VAT will be charged on online subscriptions.
For 'electronic and print' prices or prices for single issues, please contact our sales department at:
+ 44 (0) 207 014 3061 / +44 (0) 7977 003627 or sales@chasecambria.com

*International Corporate Rescue* is published bimonthly.

ISSN: 1572-4638

ARTICLE

# Distressed Valuation

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## Introduction

The analysis which has served as a general guideline for the valuation of closely held securities for many years may be applied to a broad spectrum of valuation assignments, including those related to share ownership plans, stockholder buy/sell agreements, mergers and acquisitions, corporate reorganisations, marital dissolution, and bankruptcies, among others. The approaches to valuation should not be viewed as formulaic or written in stone, but rather as tools to be used by the valuation professional in the proper context of the specifics of the company being valued. In some situations, certain valuation methodologies might be weighted or eliminated completely as inappropriate for a particular company or a particular purpose.

An appraiser is often called to assess the going-concern value of a company experiencing distress or undergoing a restructuring. Indeed, in restructuring proceedings, the courts look to the valuation analysis to test the going-concern versus liquidation presumptions and decisions often hinge on which party can present the most supportable valuation analysis.

But what differences are there when it comes to valuing distressed companies? In essence the methodologies are similar to valuing healthy companies, although the approach and methodologies do require some modification and the weighing that is applied to different valuation techniques may vary.

## General valuation principles

The fundamental premise on which all investment decisions are based is that the value to a potential investor is equal to the present worth of future benefits. This basic concept can be applied to the valuation of an entire company, as well as to the individual securities that comprise the capital structure of the company. In each instance, valuation is a matter of identifying the future returns that the company can be reasonably expected to generate and determining their present value in the context of the uncertainty associated with realising those returns.

There are three widely accepted approaches available to the valuation professional when determining the value of a business enterprise:

1. the market approach;
2. the income approach;
3. the liquidation approach.

The choice of which approach to use in a particular situation, and the relative weightings to be applied to the different valuation methods, depend on the specific facts and circumstances associated with the company, as well as the purpose for which the valuation analysis is being conducted.

When considering the valuation of distressed companies, a combination of subjective and analytical modifications to traditional valuation methodologies is required. In many cases, a company may be unprofitable in the period leading to the distress, making a simple capitalisation of operating earnings or cash flow not useful.

## Market multiples approach

The market multiples approach entails determining financial results considered to be representative of the future performance of the subject company, and capitalising those amounts by appropriate risk-adjusted rates. This approach provides an indication of value that corresponds with the particular figure being capitalised (e.g., capitalising net earnings available to common stockholders yields an indication of value for the common stock).

The capitalisation rate is an expression of what investors believe to be a fair and reasonable rate of return for the particular security given the inherent risks of ownership. It incorporates expectations of growth and rests on the implicit assumption that some level of earnings will be generated by the enterprise into perpetuity. The most common means of obtaining capitalisation rates is through the market multiple method, whereby companies having their stock traded in the public market are selected for comparison purposes and used as a basis for choosing reasonable capitalisation rates for the subject company. Capitalisation rates obtained in this manner are generally expressed as ratios of the various financial results, and are referred to as 'market multiples.' Another common method of obtaining such multiples, referred to as the comparable transaction method, involves

examining companies that have recently been sold in the public marketplace. For this method, the total price paid for the acquired company is related to financial results, which yield implied transaction multiples. The acquired company is then compared with the subject company on the basis of risk and expected return, and its transaction multiples are used as a basis for selecting appropriate market multiples for the subject company.

An analysis of comparable publicly traded companies may provide a benchmark for valuing a firm. Specifically, the appraiser can determine a public company's enterprise value by adding the company's market value of equity to the value of its interest-bearing debt net of cash. Then, the enterprise value can be divided by a number of relevant measures of financial performance (e.g., revenues, EBITDA, EBIT, etc.) to derive valuation multiples. These multiples can then be applied to the representative levels of the subject company to determine value. The key is to select appropriate multiples and representative indications of financial performance. In the selection of appropriate market multiples, one must evaluate the multiples of comparable public companies and M&A transactions, with consideration of the specific risk characteristics of the subject company.

In the determination of representative levels of revenues, earnings and cash flow, historical levels must often be adjusted to reflect previous mismanagement and any turnaround associated with relief from the company's financial problems. As briefly discussed above, such adjustments may include add-backs for restructuring costs, extraordinary salary/bonuses (private companies), margin adjustments and SG&A savings. Moreover, in many distressed companies, management (or a buyer) projects a transition (or a turnaround) period before the company stabilises and reaches appropriate representative levels.

These adjustments are needed because in such situations, the appropriate representative levels of financial performance may reflect performance in a future period which in turn should be discounted back to present values at a rate appropriate for the uncertainty of the turnaround.

### *Working capital adjustments*

Market-based approaches typically assume a 'normalised' level of working capital, as the multiples themselves are generally derived from healthy public companies with adequate working capital. In distressed companies, however, working capital levels are often compressed to unsustainable levels because of liquidity problems. These distortions can result from:

- Questionable receivables (resulting from poor service, delivery and/or product quality);
- Inflated or overvalued inventories (resulting from poor sales and stock management);
- Insufficient inventories (resulting from an inability to pay for stocks or raw materials);
- Stretched payables (resulting from the inability to pay suppliers);
- Reduced payables (resulting from the inability to finance stock).

In analysing a distressed company, careful consideration must be given to the cash-flow impacts of such irregularities, as the return to a normal working capital position can either generate or consume cash, which, in turn, impacts value. For example, meeting the normal terms of accounts payable can mean paying off past-due balances (a significant cash drain). Likewise, insufficient usable inventories or inadequate collectable accounts receivable could also consume cash as the company rebuilds inventory and sales. In this context the willingness of suppliers to extend credit may be key.

In the case of an asset sale, the buyer typically does not assume operating liabilities such as trade accounts payable. A debtor, with Court approval, may sell assets free and clear of all liens, claims and encumbrances (which attach only to the proceeds of such sales). In such cases, the debtor's estate, and not the buyer as in the case of a sale of the common stock, will have the burden of satisfying creditor demands. Through the asset purchase structure, the buyer effectively creates excess working capital (current assets less current liabilities) and can benefit from the resumption of trade credit to finance future purchases as the deleveraged company represents a better credit risk.

### *Deferred capital expenditures*

In addition to potential working capital adjustments, market-based valuations may need to be adjusted for deferred capital expenditures. In certain situations, as a company becomes distressed, near-term liquidity constraints result in under-investment in necessary capital expenditure projects which contribute to long-term value. In others, it is the deferral of capital expenditures that causes the distress. Either way, a market approach valuation needs to be adjusted for any deferred capital expenditure that is necessary to normalise the business in the long run.

### *Other adjustments*

Additional adjustments may need to be considered to determine the enterprise value. These adjustments might include:

- Excess or restricted cash;
- Non-operating assets or liabilities;
- Lack of marketability discount;

- Control premiums or minority interest discounts;
- Above or below market leases;
- Transactions with related parties;
- Excess salaries and non-operating expenses (in the case of private companies).

A determination of the impact to the cost structure of certain items may be required to determine normalised income metrics for the company, while other items are directly added (or subtracted) from the enterprise value conclusion.

### *Selection of comparable public companies*

When employing the market multiple method, it is important to obtain a representative list of publicly traded companies that are similar to the subject company. Primarily, the selected companies should offer operational and economic comparability in the areas of major importance to investors.

The search for such companies would include reviews of the public filings for comparable publicly held companies, equity research reports, and other sources. In establishing the search parameters, the following basic criteria need to be met initially:

- The company's common stock outstanding is in the hands of the public;
- The trading activity in the stock of the public company is reasonably active so as to obtain true investor sentiment;
- The company is primarily engaged in the same line of business as the subject company.

### *Comparative analysis*

Before drawing conclusions from the market multiples indicated for comparable publicly traded companies ('Comparables') it is necessary to compare the subject company with the Comparables on the basis of risk and return characteristics. The analysis generally focuses on quantitative considerations, which include financial performance and other quantifiable data, and qualitative considerations, which include any other factors that may affect an investor's perception of the risk of the subject company. An analysis of the subject company's quantitative and qualitative factors relative to the Comparables is reviewed in each of the following areas:

- *Size*. This represents the greater risk often associated where the subject company is smaller than the Comparables.
- *Liquidity*. This is generally measured by the current ratio (current assets divided by current liabilities) and the quick ratio (current assets minus inventories, divided by current liabilities). These ratios measure the short-term liquidity available to meet current debt service obligations. In general, the lower the ratios, the higher the risk faced by short-term creditors.
- *Working Capital*. This represents the normalised levels of inventories, receivables, payables and cash required through-out the normal annual business cycle. A high working capital turnover ratio (revenues divided by working capital) may indicate that a company has a low level of working capital relative to revenues, and that creditors may be in a more vulnerable and risky position. It may also indicate a more efficient use of company assets. The Comparables may exhibit varying levels of working turnover and explanations may need to be sought to understand what the correct long term ratio should be for the subject company.
- *Leverage*. This represents the relative indebtedness of the subject company (normally measured by the ratio of total debt to shareholders' equity). This ratio measures the leverage. A high ratio generally indicates a greater degree of risk for the creditors and the owners.
- *Profitability*. The subject company's profitability needs to be compared with that of the Comparables.
- *Growth*. The subject company's growth expectations needs to be measured against the analyst's forecasts for growth of the Comparables.
- *Activity Ratios*. Analysis and comparison with the ratios of the Comparables including such items as accounts receivable days outstanding, inventory turnover, and total asset turnover, is reviewed.

### *Selection of appropriate market multiples*

Market multiples for the Comparables are derived by dividing each of the Comparables' enterprise value by their respective revenues, EBITDA, and EBIT for the prior twelve month period, and projected annual periods going forward. The resulting market multiples vary, reflecting differing investor sentiment toward each of the Comparables, as well as the specific industry and the general economy. Before making the determination of the appropriate market multiples for the subject company, consideration of the particular circumstances surrounding the subject company is required.

## Comparable market transactions

The transaction approach also involves multiples of earnings and cash flow. Multiples utilised in this

approach are determined through an analysis of transactions involving controlling interests in companies with operations similar to the subject company.

### *Selection of comparable transactions*

When employing the comparable transaction method, it is important to obtain a representative list of publicly announced transactions involving target companies that are similar to the subject company in those respects carrying the greatest weight with investors. Primarily, the selected transactions should involve target companies that offer operational and economic comparability in the areas of major importance to investors.

The search for such transactions includes reviews of the public announcements, databases, press releases and public company filings, and other sources. In establishing the search parameters, the basic criteria that need to be met are:

- The target company is primarily engaged a similar line of business to the subject company;
- The financial terms of the transaction have been publicly disclosed and available;
- The transaction was conducted within a reasonable time period relative to the valuation date.

### *Comparative analysis*

As in the market multiple method, a comparison of the subject company with the comparable transactions ('Comparable Transactions') on the basis of risk and return characteristics. However, the nature of the Comparable Transactions makes a rigorous comparative analysis difficult. Only a limited comparison of the subject company with the Comparable Transactions can be made.

### *Selection of appropriate transaction multiples*

Multiples for the Comparable Transactions are derived by dividing each target company's announce transaction value by the prior 12 months revenues, EBITDA, and EBIT, preceding the transaction.

## Income approach

The discounted cash flow (DCF) method is a frequently used form of the income approach. The DCF method estimates the present value of the projected future free cash flows to be generated by a company and theoretically available (though not necessarily paid) to the capital providers of the subject company.

A discount rate is applied to the projected future free cash flows to estimate their present value. The discount rate is intended to reflect all risks of ownership and the associated risks of realising the stream of projected future cash flows. It can also be interpreted as the rate of return that would be required by providers of capital to the subject company as compensation to the capital providers for the time value of their money, as well as the risks inherent in the particular investment. Unlike the market approach, however, the discount rate contains no implicit expectations of growth for the cash flows. Instead, the projected free cash flows themselves reveal growth expectations, which allows for a great deal more flexibility in projecting growth rates

### *Discounted cash-flow*

Using a firm's projected debt-free cash-flow, a Discounted Cash-Flow Approach discounts the projected cash-flows from future years back to the present day to determine net present value. To develop such cash-flows for a distressed company, a financial advisor will:

- Develop financial projections embodying the projected turnaround, including the impact of interim operating losses. Such forecasts will be projected over a sufficient time horizon to reflect a 'stabilised' business with long-term sustainable growth prospects.
- Analyse cash flows on a debt-free basis to avoid distortions created by leverage in the capital structure. Debt-free cash flow is calculated by adding depreciation and amortisation to pre-tax operating income, and then subtracting capital expenditures, changes in working capital and the appropriate deleveraged tax expense.
- Determine a terminal value for the subject company by using a terminal multiple or terminal growth model approach.
- Determine an appropriate discount rate based on the WACC by using a combination of industry standards and subject company-specific issues, and applying appropriate return premiums to industry norms to reflect risks inherent in a turnaround scenario.

It is important to analyse the projections in the context of historical operating performance and management's expectations regarding the future prospects of the business. Furthermore, management's expectations and the subject company's ability to achieve the projected levels of performance must be judged in the context of relevant economic and industry factors and the subject company's specific risk profile.

Caution must be used when using the Discounted Cash-Flow Approach because (i) it relies on projections that are frequently subjective and (ii) the terminal value

will generally contribute a majority of the final valuation. The impact of terminal value on the final valuation is especially relevant in distressed situations where the first few years represent the turnaround period during which the subject company initially achieves negative (or depressed) cash flow. Typically, a sensitivity analysis is conducted in order to gauge the effects of achieving or missing projections.

### *Selection of discount rate*

The discount rate is intended to reflect all risks of ownership, including the associated risks of realising the stream of projected free cash flows. It can also be described as the rate of return that would be required by a company's capital providers to compensate them for the time value of their money and the risk inherent in the particular investment. Unless the capital providers could expect to earn the anticipated required rate of return, it would not be in their interest to invest. Thus, capital providers use the 'opportunity cost of capital,' or the return that could be earned on other investments with similar risk/return profiles, as the basis from which to analyse each new investment opportunity.

It is important that the discount rate be consistent with the particular cash flow stream being discounted. Because the projected free cash flows contain no deduction for interest expense, any assumptions regarding the capital structure of the firm must be incorporated into the discount rate. Therefore, the DCF method uses a discount rate based on the subject company's weighted-average cost of capital (WACC). The primary inputs to the subject company's WACC are the cost of equity capital, the cost of debt capital, the cost of preferred capital (where applicable), and the capital structure.

### *Cost of equity capital*

Estimating the expected returns for similar common stock investments is not straightforward. Unlike fixed income instruments, common stock does not provide the investor with a predictable stream of future payments. As a result, it is impossible to know exactly what returns investors expect from their investments in common stock. The most widely used method of estimating the cost of common equity is the capital asset pricing model ('CAPM'). The CAPM is an expectational model that attempts to relate the risk inherent in an investment with the returns expected by investors. In short, the price paid for an asset must yield an expected return sufficient to compensate the investor for the risk that the expected future value of the asset is not realised. Expected return estimates generated by the CAPM will not, however, compensate the investor for elements of risk that can be easily reduced through diversification in a portfolio of investments.

The following representation of the CAPM is generally used to estimate a company's cost of common equity:

$$K_e = R_f + (\beta \times R_p)$$

Where:

$K_e$ = Cost of common equity capital

$R_f$ = Risk-free rate of return

$\beta$ = Beta

$R_p$ = Equity risk premium

This application of the CAPM is built on the theory that the expected return on a common stock investment can be explained by three factors: the risk-free rate of return, the equity risk premium, and beta. The risk-free rate of return represents the market consensus expected return on a security with no risk of default. Hence, it compensates the investor for the time value of his money. The equity risk premium is intended to capture the additional return required by investors to compensate them for the risks inherent in common stock investments. Adding the equity risk premium to the risk-free rate yields the total expected return on common stock investments.

Because the riskiness of common stock investments will vary considerably, expected returns on different common stock investments will also vary. As a result, it is necessary to use the variable 'beta' as a means of adjusting the magnitude of the risk premium to suit the specific risk profile of the subject company security. Beta is a standardised measure of non-diversifiable risk, and is defined as the covariance of the returns on the particular asset with the returns on the market portfolio, divided by the variance of the returns on the market portfolio. The beta for the market portfolio, or the 'average' common stock investment, is 1.0. The higher the perceived riskiness of a particular common stock investment, relative to an average common stock investment, the higher the beta will be.

Most critics of the CAPM methodology relate to the fact that the cost of equity is calculated by reference to historic data and various practitioners have tried to examine forward looking equity return requirements using current market price volatility as a proxy for the perceived riskiness of the equity and adjust the cost of equity accordingly.

### *Cost of preferred capital*

If the subject company's capital structure includes preferred stock, the cost of such preferred stock can be determined by analysing the security's dividend yield. An adjustment to the yield rate is required if it is determined that the stated rate of return is not a market

rate at the particular valuation date. Unlike interest on debt, however, dividend payments to preferred stockholders may not be tax deductible and therefore, no corresponding tax adjustment is necessary.

### *Weighted-average cost of capital*

The WACC is an average of the costs of all sources of capital (debt, preferred and common equity, etc.) for the subject, with each source weighted by its respective percentage share in the capital structure of the company. The following formula is the representation used to calculate the WACC of a company:

$$WACC = K_d\,(1-t)(D/EV) + K_p\,(P/EV) + K_c\,(C/EV)$$

Where:

| | | |
|---|---|---|
| WACC | = | Weighted-average cost of capital |
| $K_d$ | = | Cost of debt capital (pre-tax) |
| $K_p$ | = | Cost of preferred equity capital |
| $K_c$ | = | Cost of common equity capital |
| D | = | Debt capital (market value) |
| P | = | Preferred equity capital (market value) |
| C | = | Common equity capital (market value) |
| EV | = | Enterprise Value (market value) |
| t | = | Marginal corporate tax rate |

The application of CAPM to compute a reasonable cost of equity for a company and the selection of the additional variables used in the WACC equation are based, in part, on the comparative analysis of the Comparable to the subject company as summarised above.

### *Determination of terminal value*

The terminal value used in the DCF method is essentially an estimate of EV as of the end of the final period for which cash flow projections have been made. It is necessary to compute this value since the subject company is expected to remain a viable going-concern beyond the final period. The determination of the terminal value can be accomplished by either: i) using an 'exit multiple' method, which uses a projected market multiple applied to a representative level in the final year of the projection (essentially based on the market approach); or ii) by discounting the terminal year free cash flow as a growing perpetuity. The terminal value is then discounted back to the Valuation Date using the previously selected discount rate.

## Liquidation value

In a worst-case scenario, the assets of a company are worth more than the on-going enterprise. In all cases, a distressed company must evaluate its value in liquidation since this exercise establishes the baseline against which all offers must be evaluated at a minimum. Generally, without creditor consent, a sale transaction cannot be consummated unless the value exceeds liquidation.

Liquidation involves an analysis of individual assets values, so the emphasis shifts to the items on the balance sheet. The liquidation premise of value could be materially different depending on whether the valuation contemplates the sale of assets in an orderly disposition vs. a forced liquidation – with the main difference being the time of exposure of the asset to the appropriate market.

In this context it is worth considering some of the individual asset classes that need to be valued:

- *Cash.* An automatic reaction may be to accept cash values at 100% of the indicated value. However, cash balances have a habit of disappearing in distressed situations approaching liquidation, and even where they do exist, the cash balances may be restricted for use in certain situations such as collateral for credit insurance contracts.
- *Inventories.* The value of inventories depends on the particular industry, whether they represent finished goods, work in progress or raw materials. Retention of title claims can also significantly impinge inventory liquidation values.
- *Receivables.* The value of receivables will be situation specific. It is often difficult to collect outstandings in a liquidation situation from disgruntled customers who may well have received poor service. Values may also be reduced where the customer has a counter-balancing claim against the subject company for breach of contract in respect the provision of underlying goods or services.
- *Property.* Clearly in today's market property values have fallen and significant additional discounts may be required to dispose of such assets where potential buyers are aware of the distressed nature of the sale.
- *Intangibles.* The value of intangibles is very item specific. Brand name sales often do realise some value whereas previously acquired goodwill is by definition worthless.

## Conclusion

The situations and circumstances underlying the distressed company will differ widely on a case by case basis. Thus, it is the valuation professional's duty to address

the specific issues in analysing the financial condition of a distressed firm in order to provide an appropriate valuation of the company's business. The valuation of a distressed company is not a simple application of the previously described methodologies, but involves a careful analysis of the relevant factors to produce the best estimate of the value of the distressed firm.

## International Corporate Rescue

*International Corporate Rescue* addresses the most relevant issues in the topical area of insolvency and corporate rescue law and practice. The journal encompasses within its scope banking and financial services, company and insolvency law from an international perspective. It is broad enough to cover industry perspectives, yet specialized enough to provide in-depth analysis to practitioners facing these issues on a day-to-day basis. The coverage and analysis published in the journal is truly international and reaches the key jurisdictions where there is corporate rescue activity within core regions of North and South America, UK, Europe Austral Asia and Asia.

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