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## Distressed firms valuations

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The current financial crisis has undermined the financial health of many businesses and invalidated the capital structures of LBOs conducted in recent years, in which groups rashly financed their acquisitions through aggressive leveraging strategies. The situation is even more perilous and complex when the problems of an inappropriate financial structure are compounded by operating difficulties.

A company's capital structure may be seen as an understanding between the equity holders and debt holders for the purpose of sharing future free cash flow on the basis of an expected business plan. If the business plan is seriously compromised, this understanding is no longer valid and has to be renegotiated if the business is to survive (However, if the ability of the company to meet its financial obligations is not seriously jeopardised, debt holders may elect to temporarily waive their rights and allow the company to continue to operate as before). In these circumstances, the capital providers will revalue the business as a first step in determining a more appropriate financial structure, i.e., a new 'contract' and a new value for their rights.

So valuation is a key issue in a financial restructuring process and its core importance was recently recognised in a decision of the UK High Court of Justice in the case involving IMO Carwash. In this restructuring, the mezzanine lenders had challenged the senior creditors' valuation and – for the first time – the judge examined in great detail the valuations submitted by both parties. In this case, the court ruled against the mezzanine lenders who did not produce valuations considered by the judge as being of a sufficiently high professional standard.

This is a groundbreaking court decision and will cause the various parties in a restructuring to perform more rigorous, clearly-documented valuations. Therefore, valuation is set to become a vital bargaining, decision-making and litigation tool.

The complexity of valuing a company in a restructuring situation (which starts when there are indications that its debt covenants may be broken in the short term) should not be underestimated. First, there is the general climate of uncertainty currently affecting the company: economic and competitive disruption as well as question marks over the restructuring process and its conclusion. The value of the business and its different capital structure layers may change rapidly over this period and is distorted by both the legally regulated relationship and the contractual balance of power among the different stakeholders.

Complexity also arises due to the need to factor in aspects that may be unknown or neglected by appraisers in plain vanilla valuations. Valuing a distressed business requires a number of different trajectories to be tested; the risk of bankruptcy needs to be factored in together with its direct and indirect costs; a financial structure needs to be identified that is compatible with the business plan; and the annual discount rate needs to be adjusted in line with risk, changes in the financial structure and any possible tax savings. The heterogeneous nature of the required information precludes mechanical or accounting approaches and obliges the appraiser to have a thorough understanding of how debt restructuring processes could develop.

So valuations that are performed within the scope of financial restructurings can be quite different from standard business valuations. In order for the valuations to help with decision-making, a more pragmatic approach is needed and the methodology must produce a finer-tuned analysis capable of addressing the specific financial aspects of the operation.

The negotiations conducted around financial restructuring are usually very tough and require preparations down to the last detail by all those involved. Success hinges on the ability to know and understand one's options and to evaluate those of one's opponents

as accurately as possible.

To prepare for the confrontation, debt holders, unsecured creditors, equity investors, other claim holders of the company, and management must all have a keen understanding of the key components of the business value, such as: operating and financial risk; short-term liquidity; the financial and economic conditions of its recovery and the various possible restructuring scenarios; borrowing capacity in light of available cash flows; potential asset divestments; required financial flexibility; and liquidation value.

As such, the appraiser's approach must be a resolutely strategic and financial one. His analysis may need to draw on modelling of different financial scenarios, cash flow stress testing based on changes to various key assumptions, and catastrophe loss modelling in order to gain a keener understanding of the businesses' requisite financial safety net.

Determining a suitable financial structure – a task which is not covered by traditional financial valuations – should be based on financial forecasts and may include, among other things, an analysis of the strategic flexibility that the business will need to maintain in the light of its current development projects, the maturity of its business sector, the intensity of the competitive environment, the financing policies of its competitors, and rating objectives.

The value of the different financial instruments, particularly debt, is analysed from a dual legal and financial perspective. Indeed, beyond the financial characteristics of the instruments which include the required rate of return and the probability of default, contractual covenants, guarantees, subordination of the debt and the positioning of each entity within the group legal structure are factors that have an impact on the recovery rate. The valuation process has to take into account all these legal dimensions to throw light on the financial impact of these issues. While the answers may not be definitive, they may provide one or more of the parties with an edge in negotiations.

Consequently, valuing an entity in a restructuring can be very different from standard valuation practices whereby appraisers often rely upon and accept all of the forecast data they have been able to get their hands on. In a restructuring, the appraiser casts a critical eye on the available data. He accepts the inherent uncertainty of the situation and conducts additional, complex analyses of a more financial than accounting nature.

To determine the value of a business, appraisers typically use two principal methods. The first uses implied trading and/or transaction multiples of comparable firms. The other method is the Discounted Cash Flow method (DCF) which entails estimating and discounting future free cash-flows to present value based on the company's business plan.

Putting together a sample of comparable companies in the case of firms undergoing restructuring can be tricky due to the highly specific situation of the business in question (unless it can be assumed that the entire sector is in a similar situation). So it may be difficult to come up with a representative sample of comparable companies, especially when the risks of the entity are expected to fall significantly if it manages to emerge from its current crisis situation.

Using the Discounted Cash Flow method for businesses that are

undergoing a restructuring also has a number of major problems. For a start, practitioners generally assume a static financial structure which results in a static discount rate for the entire term of the transaction; this, however, may not be a valid assumption for a business undergoing financial restructuring. If the negotiations lead to a massive reduction in the entity's debt, the changes to its financial structure will significantly alter risk as well as the way in which risk is shared between equity holders and debt holders.

Following on from the previous point, the Weighted Average Cost of Capital (WACC) may vary over time as the restructuring plan is put into action. This raises methodological issues in relation to estimating the various components of WACC (beta, target leverage, etc.) which should be applied recursively.

Finally, the terminal value, which is more important in terms of the overall business value than in any other situation, is largely hypothetical insofar as it is contingent on the success of the restructuring plan. This means that it is difficult to simply transpose 'standard' methods of calculating residual value to firms undergoing restructuring and substantial modifications are required.

One model that could be used to account for the specific aspects of any restructuring operation is an Adjusted Present Value (APV) model. The classic definition of APV sets the value of the business at the unleveraged value of the firm (or the value of its operating assets), plus the present value of the interest tax savings generated by borrowings (Modigliani and Miller, 1963). The advantage of this model is that it incorporates changes to the financial structure and only takes account of tax savings if they are likely to accrue, both of which are essential when valuing restructuring entities.

The APV model can be adapted by factoring in the probability of liquidation 'p' which measures the possibility that the restructuring plan will fail and that the business will end up in liquidation ('p' may vary over time). This approach measures the change in default risk over time and identifies the 'decision-making nodes' on which survival of the business depends:

$$APV = \left[ \left( \sum_{t=1}^{\infty} \frac{FCFF_t}{(1+ku)^t} + \sum_{t=1}^{\infty} \frac{D_t \times i \times IS}{(1+kd)^t} \right) \times (1-p) \right] + (LV \times p)$$

FCFF: operating free cash flow to the firm at time t

ku: unleveraged cost of equity

Dt: nominal value of debt at time t

i: nominal interest rate

IS: income tax rate

kd: cost of debt

LV: present value of liquidation value

p: probability of liquidation

When valuing businesses that are undergoing restructuring, careful attention must be paid to estimating certain specific parameters. For example, the debt beta should not be overlooked

when determining the unleveraged cost of equity ( $k_u$ ) (whereas this value is of secondary importance for 'stable' businesses whose debt beta is close to zero).

Other approaches are also possible – particularly when estimating the value of different capital layers – that clarify certain patterns of behaviour and provide useful indicators and concepts, even though these may be difficult to apply in practice. For example, the option pricing theory can provide a useful basis for measuring the market value of the equity of a business undergoing restructuring. According to this theory, the equity holders are deemed to hold a call option on the value of the economic assets of the business once the debt comes due. In addition to holding a risk-free debt, the debt holders are deemed to have sold the shareholders a put option on the economic assets. This approach measures the value transfers between equity holders and debt holders that would arise from planned financial or operating decisions.

More than any other situation in the life of a business, restructuring makes it critical to value the assets and financial claims on the business. But both the context in which restructuring takes place and its sheer complexity require the use of specially tailored valuation approaches, very different from those used by appraisers in their normal assignments, to create a consensus or, sometimes, to present solid arguments in court. The success of the entire negotiation process and consequently, the very survival of the business is at stake.

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