Discounted Cash Flow Methodology – Issues

In applying the Discounted Cash Flow (DCF) valuation approach, future expected Unlevered Free Cash Flows (UFCFs) are discounted by the Weighted Average Cost of Capital (WACC) to determine a firm´s Enterprise Value (EV). – Issues in regards to this approach relate to – among others – long-term assumptions made.

The DCF approach actually consists of two parts: In a first step, UFCFs are discounted by the WACC over the planning horizon (usually a period of 5-7 years). Then, in a subsequent step, a Terminal Value (TV) must be estimated for all UFCFs beyond the planning horizon: Latter is either done by assuming a going concern of the firm, whereby a perpetual growth rate is applied to reflect future expected UFCF dynamics. Or, as an alternative approach, the sale of the business is assumed at the end of the planning horizon, in which case an exit EV multiple is most frequently applied.

Not least as it takes considerable time and effort to implement, the DCF approach is seen as the most sophisticated valuation methodology. A core tool in undertaking due diligence of a firm, the DCF approach requires assumptions for numerous input parameters, as it is applied to help determine a firm´s fundamental, intrinsic value. That result should be cross-checked by alternative valuation methodologies, though, such as multiples – based either on the comparable company analysis or premiums paid. These price-based cross-checks are essential in verifying assumptions made in a DCF context.

A fundamental issue with the DCF approach is the following, though: Even if the firm to be valued were a reasonably mature and stable one, in most instances a mere 15-20 per cent of its EV would originate from within the period of its planning horizon, usually the next 5-7 years. The vast majority of a firm´s DCF-related value would solely be driven by one single parameter, though: the TV. – However, in practice not much attention appears to be paid to this fact: This is even more stunning as in applying the DCF approach, next to the WACC, the perpetual growth rate driving the value of the TV is almost always the by far most sensitive parameter within the whole methodology.

One must appreciate that the DCF-based valuation approach assumes long-term stability in a firm´s business model and its related industrial environment. This assumption, however, contradicts the fact that virtually all products and services go through a life cycle, even if respective longevity may vastly differ. Now, whilst the calculation of a DCF´s TV is based upon the assumption of a perpetual growth rate till eternity, every business model eventually enters a phase of more or less steady decline. It seems, though, that in the DCF approach this very fact and the time-related risk associated with seem both grossly underestimated. Now, in order to visualize an anticipated slowdown, either alternative scenarios have to be modeled or – as a minimum - extensive sensitivity analyses undertaken to better anticipate possible future trends or developments and illustrate their respective valuation-related impact.

Another important issue concerns the WACC, which should reflect and represent a firm´s long-term stable capital structure. Therefore, it is not the present, current capital structure which shall drive the WACC. Reviewing capital structures of comparable peers and assuming that - over time - all of them will converge to a similar balance sheet composition of equity and debt may make sense: One may deviate from this approach, though, if a firm decided to differentiate itself from the industry standard by intentionally pursuing a unique credit rating policy.

Another important aspect regards the Market Risk Premium (MRP) embedded in the cost of equity component of the WACC: Over time, a local MRP (i.e. difference between the return of the market and the risk-free rate) fluctuates, often even widely. Whilst long-term historical data series are commonly used to determine the MRP, the more relevant approach would actually be a long-term forward looking one.

On a concluding note: Whilst foremost associated with determining a firm´s value range, the DCF valuation approach is actually an essential tool in the context of undertaking due diligence. Properly applied, the methodology disciplines analysts as well as investors to ask critical, appropriate questions to confirm the validity of a firm´s business model and the sustainability of the industry it is operating in.

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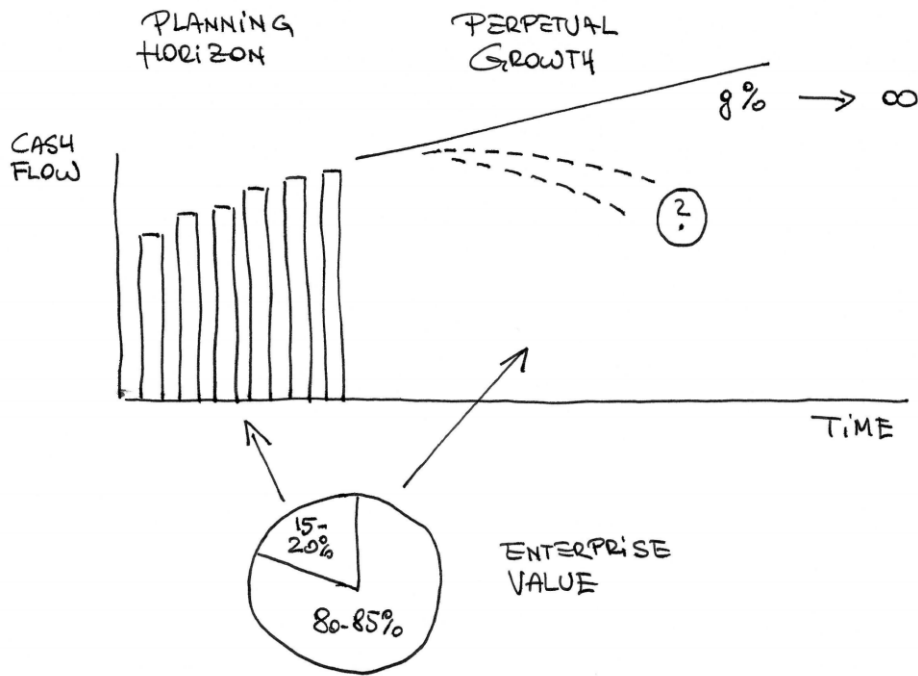

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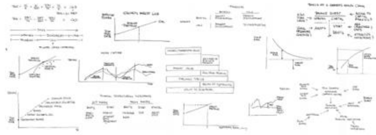

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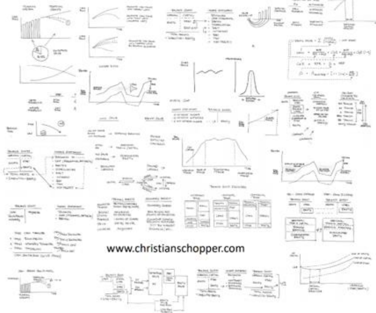

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