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). 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 simulate future expected UFCFs. Or, as an alternative approach, the sale of the business is assumed, whereby an exit EV multiple is most frequently applied.

The DCF is generally regarded a sophisticated valuation approach: Alternative valuation methodologies, such as multiples - either based on the comparable company analysis or premiums paid - are rather applied as crosschecks to verify assumptions made in a DCF.

However, the fundamental issue with the DCF approach is that – according to its unique methodology - a reasonably stable, mature firm would generate merely between 15-20 per cent of its EV over the planning horizon, with the remaining contribution coming from the TV. Remarkably, 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 by far the most sensitive parameter within the whole methodology.
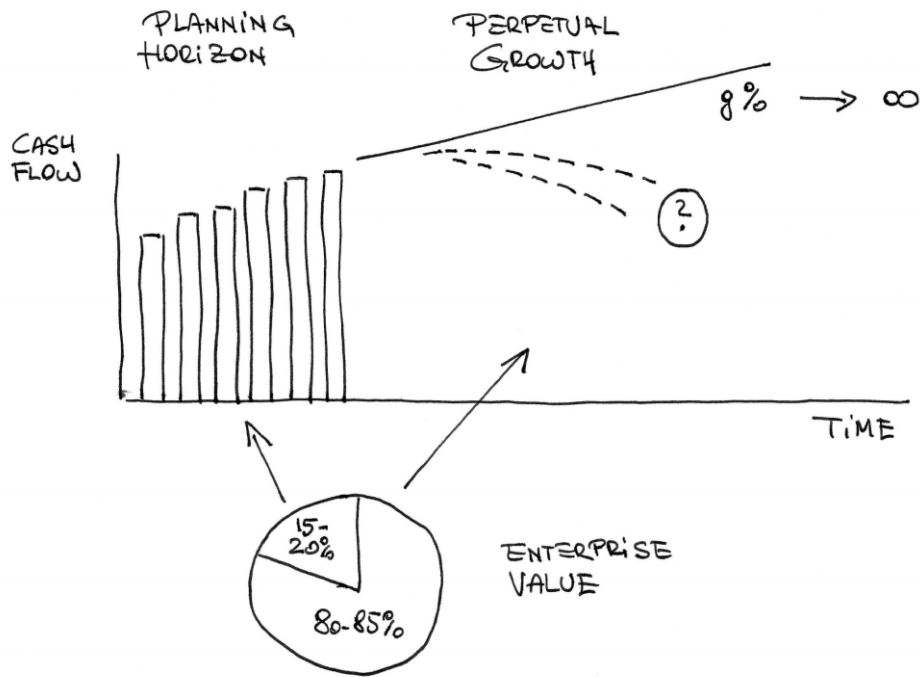
Uniquely, the DCF-based valuation approach assumes long-term stability in a firm´s business model and its related industrial environment. This assumption, however, contradicts the fact that all products and services go through a life cycle, even if the respective longevity may differ. Now, whilst the 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. Whereas in the DCF approach this fact and the time-related risk associated with it seem both grossly underestimated factors. In order to visualize such 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 their 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 an individual, unique credit rating policy.
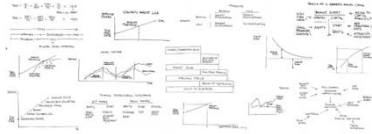
Another important aspect regards the Market Risk Premium (MRP) embedded in the cost of equity component of the WACC: To start with, over time a local MRP (i.e. difference between the return of the market and the risk-free rate) fluctuates, often even widely. Whilst long-term historical data series are commonly used to determine the MRP, the more relevant approach would actually be long-term forward looking.

On a concluding note: Whilst foremost associated with determining a firm´s value range, the DCF valuation approach is actually a very useful tool in the context of undertaking due diligence. Properly applied, the methodology disciplines analysts as well as investors to ask critical, relevant 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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