VALUATION

Discounted Cash Flow Methodology – Issues

In the Discounted Cash Flow (DCF) valuation approach, future expected unlevered free cash flows are discounted with the Weighted Average Cost of Capital (WACC) to estimate the present value of an investment proposition, the enterprise value. – Issues in this approach relate to – among others – the assumptions of long term stabilities.

In a first step, in the DCF approach, unlevered free cash flows are discounted with the WACC over the planning horizon. Subsequently, after the planning horizon a terminal value must be estimated: This is either done by assuming a going concern of the firm, whereby a perpetual growth rate is applied to simulate future expected cash flows. Or, as an alternative approach, the closure or the sale of the operations is assumed, whereby in this case an exit enterprise value multiple is usually applied.

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

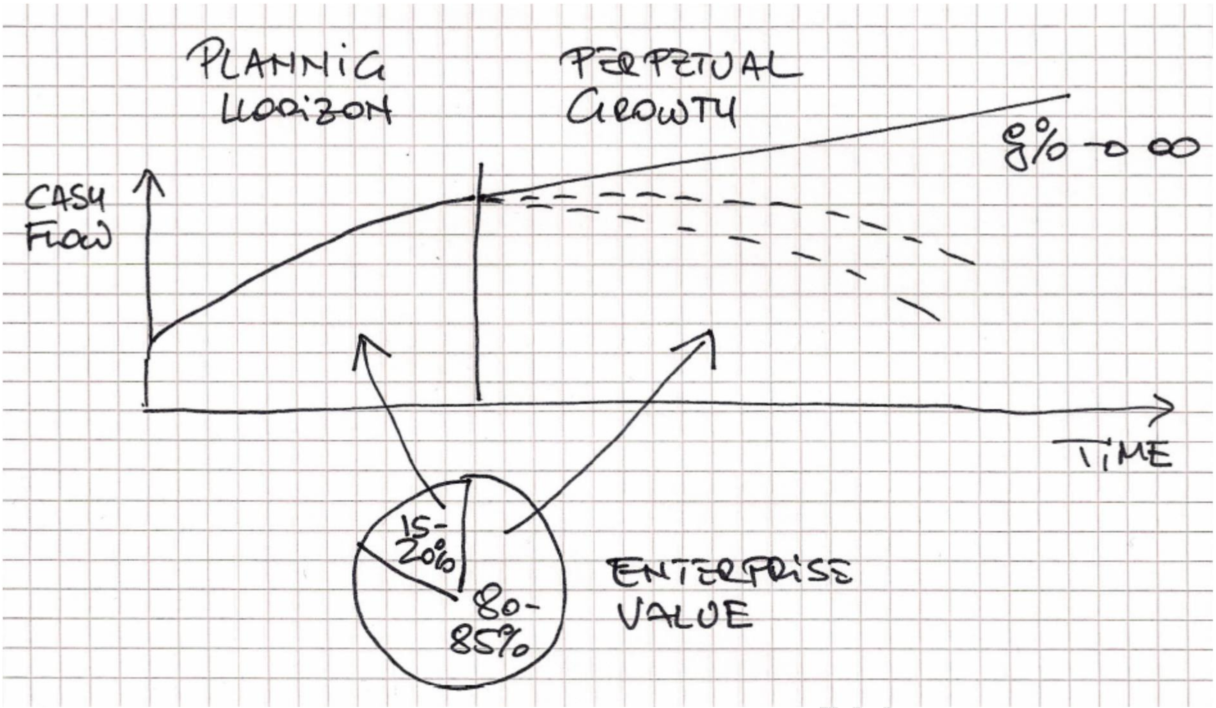
However, the fundamental issue with the DCF approach is that - based on the methodology embedded - a reasonably stable or mature firm would generate only approximately 15-20 percent of its enterprise value over the period of the planning horizon (usually a period of 5-7 years): The remainder would be contributed by the terminal value. It is a remarkable fact that in structuring the DCF approach, individuals involved would spend the vast majority of their time and effort on the period of the planning horizon, whilst thereby basically overlooking the importance of the value contribution by the terminal value: People regularly misjudge the fact that it is indeed the perpetual growth rate which is the most sensitive parameter in the whole approach.

The DCF methodology assumes a long-term stability in the firm´s business model and its related industrial environment. This contradicts, of course, the fact that basically all products and services have a life cycle of – though - different maturities. The calculation of a terminal value is built upon the assumption of a perpetual growth rate. However, what is actually expected to happen in every business model is ultimately - sooner or later - a steady decline. It seems to be that the risk in regards to the dynamics of the anticipated decline is a grossly underestimated factor. What may help to better visualize its impact is either running different scenarios or – as a minimum - several sensitivity analyses to illustrate possible alternative future developments.

Another issue, although to a lesser extent, concerns the WACC, the discount factor, which should reflect and represent a long-term stable capital structure. Therefore, it is not the present, current capital structure which is to drive the WACC. A reasonable approach to resolve this issue is to review the capital structures of comparable peers and assume that - over time - all of them will converge to a similar balance sheet composition of equity and debt: One may deviate from this assumption if a firm decided to differentiate itself from the industry standard due to an intentionally pursued different credit rating policy.

And, as far as the market risk premium in the cost of equity component of the WACC is concerned, this is also fluctuating widely. Whilst usually long-term historical data series are used to determine the difference between the return of the market and the risk free rate, the market risk premium should actually be long-term forward looking: And historical reviews may by no means be appropriate to determine what shareholders will require to be adequately compensated for taking risk, the return of which is only materialize in the future.

The morale of the story, however, seems to be that a DCF valuation approach is to a lesser extent undertaken to eventually end up with the “correct” value of the target, but instead in order to perform a thorough due diligence on the target and its industry segment, to be in a position to ask relevant questions.


PLANNIG
HORIZON
PERPETUAL
GROWTH
g% → ∞
CASH
FLOW
TIME
15-
20%
80-
85%
ENTERPRISE
VALUE