Discounted Cash Flow Methodology – The Country Risk Premium

In the Discounted Cash Flow (DCF) valuation approach, future expected Unlevered Free Cash Flows (UFCFs) are discounted with the Weighted Average Cost of Capital (WACC) to determine a firm´s enterprise value. - When investing outside one´s domestic market, in certain constellations a *Country Risk Premium* (CRP) may be added to the WACC, reflecting the unique, additional risk assumed.

The concept of a CRP is often associated with emerging markets: These are typically characterized by a weak regulatory framework, weak implementation through courts and administration, political instabilities as well as by a lacking infrastructure, all on top of rather illiquid capital markets. Further, the macro-economic environment in such markets can be challenging, for instance characterized by high inflationary pressure, not least resulting in a high volatility of currency exchange rates. – Positive attributes, such as an excellent growth prospect, anticipated economic transformation and an outlook for improvement of political and regulatory weaknesses could by far outweigh mentioned risks.

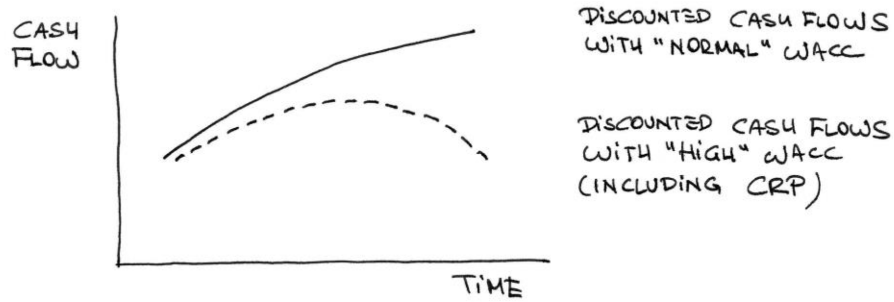
However, for valuing an asset in an emerging market, the same basic principles apply, such as valuing an asset in any other market: It has to be valued on a stand-alone basis, within its economic environment. - Therefore, the input parameters of a DCF valuation approach will be based on and driven by the local currency as well as the local money and capital markets. Consequently, all DFC-relevant parameters have to follow: For instance, future expected UFCFs would be forecast in local currency. Or, the applied WACC would have to consider local macro-economic and market characteristics, such as local inflation (embedded in the local risk-free rate) or the local Market Risk Premium (MRP, i.e. the difference between the return of the local market and its applicable risk-free rate). In regards to the MRP, one may assume this to be comparably higher for any emerging market than such of established, liquid and stable capital markets.

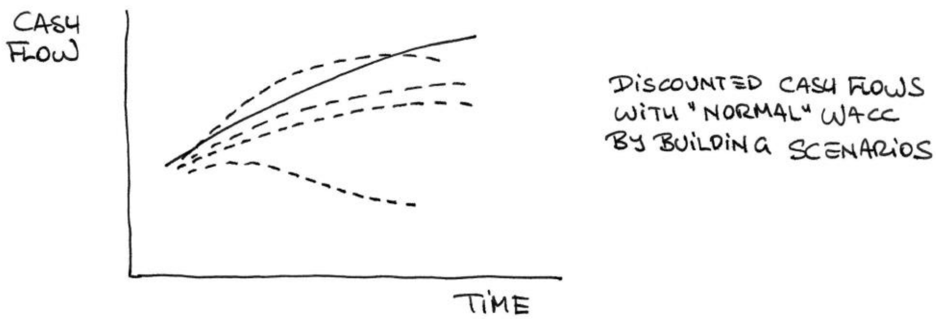
However, whilst an approach based entirely on local parameters is in essence the right one, practical issues do arise: For instance, capital markets history in emerging markets tends to be short. Hence, estimating a local MRP is not only difficult amid lack of reliable data and data history, also approximation attempts often end in outrageously high estimates or fluctuate widely, due to contrasting periods of high yields, inflation and volatility amid instable capital flows. - Not least for these reasons, analysts by times prefer to re-base DCF input data on a stable base currency (e.g. US$, EUR). However, this requires a transfer of the entire DCF framework and all relevant parameters into the chosen base currency, including the WACC, whereby a CRP is added to the respective stable currency environment´s MRP.

For a number of reasons, this approach should be implemented with caution, though: To start with, when assessing an emerging market-based asset by using a stable currency framework, such as US$, not only the estimation of an appropriate CRP may already pose a challenge. Latter could be determined, if the respective emerging country had, for instance a US$-denominated 10-year sovereign bond or similar outstanding. The spread between that bond and the respective US 10-year T-bond could be used as a first guidance to determine a preliminary CRP. Further, though, the respective emerging country government bond is assumed behaving considerably more volatile than the US 10-year T-bond benchmark, which would also have to be accounted for. Hence, the preliminary CRP would have to be multiplied with the ratio of the assumedly higher volatility of the US$-denominated emerging market government bond and the respective volatility of its stable benchmark.

Frequently, though, emerging markets sovereigns may not even have sufficiently long government bonds outstanding, neither in local nor in a foreign currency. In this case, only approximations or good guesses may help.

Such approach triggers a much more principle issue, though: Shouldn´t the relatively higher emerging market macro-related risk rather be illustrated and analyzed by drafting a set of different scenarios, ideally all within the local currency environment. Hence, such scenarios would require to spread risks over both, future expected UFCFs as well as a local WACC, instead of merely adding some (probably quite inaccurate) CRP on a stable base currency-driven WACC. Certainly, attaching probabilities to UFCF scenarios would be a tedious task, but perhaps worth it. Especially, if one viewed the entire DCF valuation approach as tool of due diligence.


CASH FLOW
TIME
DISCOUNTED CASH FLOWS WITH "NORMAL" WACC
DISCOUNTED CASH FLOWS WITH "HIGH" WACC (INCLUDING CRP)


CASH FLOW
TIME
DISCOUNTED CASH FLOWS WITH "NORMAL" WACC BY BUILDING SCENARIOS

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