CHAPTER 8

Discounted Cash Flow Method

Kai F. Schumacher and Henner Klönne

1 Introduction to the Discounted Cash Flow Method

Damages—if any—are usually calculated to determine the amount necessary to put the claimant in the position it would have been in had the respondent's wrongful act not occurred.[1] Typically, damages cannot be quantified by mere observation or some readily available analysis. Instead, damages most often are calculated by taking the market value of the asset in dispute without the wrongful act (a situation known as the "but-for scenario") and deducting the actual market value as at the same valuation date.[2] As a consequence, two market values—one "as expected" and one "as-is"—must be determined. Then, the difference between those two values must be calculated to derive the damages. This valuation approach is known as the "differential method." It is applicable to most valuation methods.

What sounds like a straightforward task in theory, in practice, often leaves arbitrators with widely differing valuations presented by opposing quantum experts. The divergence stems partly from differences in the valuation method used to derive the value of a business or asset. Different valuation methods might come to (slightly) differing results. However, in recent years, the discounted cash flow method ("DCF method"), which discounts future cash flows to the present value, has become increasingly popular for the quantification

* The opinions expressed are those of the authors and do not necessarily reflect the views of AlixPartners, LLP, its affiliates, or any of its other professionals or clients.

1 *See* Mark Kantor, Valuation for Arbitration: Compensation Standards, Valuation Methods and Expert Evidence 16 (2008); Irmgard Marboe, Calculation of Compensation and Damages in International Investment Law 31–2 (2009); *see also* Richard M. Wise, *Quantification of Economic Damages* 5 (McGill University, The Law of Damages, Oct. 18–19, 1996), http://www.wiseblackman.com/english/pdf/Article15.pdf.

2 Unfortunately, there is no consistent definition regarding the term "market value" and how it relates to similar definitions such as "fair market value." Practitioners, academics, and valuation standards use the terms inconsistently.

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of damages in international arbitrations.[3] For example, in the recent award of *Rusoro Mining Ltd. v. Venezuela*, the tribunal observed that "[v]aluations based on the DCF method have become usual in investment arbitrations, whenever the fair market value of an enterprise must be established."[4] The DCF method has also become quite common for the valuation of other assets.

In the authors' experience, arbitrators are more often confronted with differing results stemming from different assumptions and applications of the DCF method than from differing valuation methods. This Chapter provides guidance for arbitrators and legal counsel to better understand the reasons for the differences in damages derived by opposing experts using the DCF method. Section 2 of this Chapter elucidates the basic concepts of the DCF method, provides a short introduction to the variety of DCF methods seen in practice, and gives an overview of the main components of the DCF method that are most often disputed in investment treaty arbitrations. The Chapter then analyzes: how to deal with uncertainties or "speculation" inherent in new or expanding businesses (Section 3), how the duration relevant for compensation is best approximated (Section 4), the key drivers of discount rates (Section 5), the role of premiums and discounts, and in particular illiquidity discounts which are sometimes applied (Section 6), and helpful cross-checks to market references or previous transactions which may indicate if damages are in the right ballpark (Section 7).

2 Overview of the DCF Method

The DCF method represents the so-called "income approach." It is not only the most frequently proposed valuation method in investor-State arbitrations,[5]

3 *See* PricewaterhouseCoopers, *2015—International arbitration damages research*, 3 (2015), https://www.pwc.com/sg/en/publications/assets/international-arbitation-damages-research-2015.pdf.

4 *Rusoro Mining Ltd. v. Bolivarian Republic of Venezuela*, ICSID Case No. ARB(AF)/12/5, Award, ¶ 758 (Aug. 22, 2016). However, the tribunal rejected the DCF calculation and opted to use a weighted average of three other valuation methods (*i.e.*, maximum market value, book value, and adjusted investment value) in awarding damages to the claimant.

5 *See* PricewaterhouseCoopers, *Dispute perspectives: Discounting DCF?* [hereinafter PricewaterhouseCoopers, Dispute perspectives] 3 (2016), https://www.pwc.co.uk/tax/assets/dispute-perspectives-discounting-dcf.pdf.