

methods. It rather entails a more time and cost consuming valuation procedure and leaves the appraiser with the problem of having to deal with several questionable value figures instead of one. In short: several value outcomes of limited or lacking usability are not better than one. Secondly, a number of diverging outcomes would have to be dealt with and merged into one. This would constitute a further step which brings about possible pitfalls as it is unclear how the outcomes should best be treated, for example weighted and merged.

Applying many inconsistent methodologies instead of one therefore does not add quality to the valuation process. It would rather be more economical and reasonable to use one single flexible and comprehensive technique which takes all due factors into account but omits as many flaws entailed by current methodologies as possible.

One central circumstance such a methodology would have to handle in the course of future-related, strategic valuations is that the future is always uncertain. Every valuation, therefore, by definition involves guesswork. Hence, there is no such thing as an accurate future-related valuation. This is a reality which must be accepted with respect to any valuation object, be it a tangible asset such as a house or an IP asset, for example a patent. It is therefore crucial not to make higher demands on the valuation of IP assets than on the valuation of other assets which is already more established and recognised, such as real estate or bond valuation.

Instead of representing the uncertain future on the basis of a fragmentarily understood present, one needs to change understanding of the present for the better. Hereby, it is expedient to begin the train of thought with the general and end at the specific. Transferred to valuation of intellectual property assets, this means that one should first of all work out value-determining characteristics all assets (tangible and intangible) have in common. Using findings herefrom as a basis, one can subsequently work out specifics pertaining to IP assets. Such *modus operandi* avoids the risk of focussing on detailed characteristics of IP assets too early, thereby overlooking fundamental and basic coherences of value and valuation.<sup>553</sup>

As worked out in chapter one, scarcity, utility and title are constitutive factors

553 This is the reason why important fundamental value-related issues pertaining to intangible assets have been elaborated in this work before attention has been turned to IP assets, particularly trade marks, and related brands.

of value of any asset. They therefore need to be operationalised in every comprehensive valuation tool.

Furthermore, in the light of the definition of monetary (brand) value given in chapter two,<sup>554</sup> reduction of asymmetry of information and therefore of risk is also fundamental to a value finding process. This can be achieved through operationalisation of as many qualitative and quantitative factors as possible in the light of keeping the valuation process coherent and clear. Such factors need to represent all actualities which have a bearing on value. These include not only financial issues but also legal, business strategic and technical conditions. These information-gathering factors can deal with both general questions of value and issues specific to the intellectual property asset under assessment.

A flexible and comprehensive valuation tool thus outlined will be introduced in the following chapter.

554 At 2.2.2.1.

## Chapter 4

### A Systematic Integrated Valuation Methodology

The preceding chapters have shown that there are fundamental coherences pertaining to intellectual asset and intellectual property valuation. By necessity, any comprehensive IP valuation methodology needs to take them into account. Also, such methodology should reflect thorough understanding of specific nature and value-related characteristics of the valuation object.

As elaborated in the preceding chapter, current brand valuation techniques do not fulfil these and other requirements to a satisfactory degree. This lack of quality is a main reason for the extent of practical application of brand valuation falling short of its perceived importance.

The author's own<sup>555</sup> systematic integrated intellectual property valuation methodology (or SIM) has been designed to help close this implementation gap. It will be introduced in the following. It has been created specifically with the abovementioned goals in mind and will, like the valuation tools in the preceding chapter, be verified against the requirements a forecasting valuation technique must meet.<sup>556</sup>

#### 4.1 Overview of the Valuation Process

In order to achieve the objectives just outlined and set forth in previous chapters, the SIM has been designed as a business process-like valuation

555 Developed in co-operation with Mr. *Paul G Fairhurst*, whose research focus is on the valuation of patents.

556 Cf. 1.4.

methodology. Building upon existing positive features of the current state of the art of brand valuation, it uses a commonly accepted financial method as a starting point within the first step of the valuation process, the financial income-based analysis. A contextual, qualitative evaluation process (named ‘prismatic evaluation’) is applied as a second step in order to arrive at a comprehensive value outcome which can be expressed in monetary terms.

#### 4.1.1 Financial Income-Based Analysis

For most strategic valuation scenarios, a monetary value outcome is desired. Therefore, a financial component needs to be applied by the respective valuation tool sooner or later. The income approach is such a financial element. It is the component of the SIM to be applied initially, in the form of a discounted cash flow and decision tree analysis.

##### 4.1.1.1 Income Approach, DCF and Decision Tree Analysis

According to the income approach, the value of an asset lies in the sum of the estimated future income streams which can be derived directly from it.<sup>557</sup> As set forth above, it is, despite its shortcomings, a widely accepted valuation tool with good reason.<sup>558</sup> Out of the three basic and traditional financial valuation approaches, it is the most apt one for use in valuations for strategic purposes, because it is future-oriented and focuses on a crucial factor of value of an asset: its ability to create revenue. It would not be comprehensive enough as a sole valuation tool, as it does not consider qualitative contextual value influencing factors.<sup>559</sup> However, as a starting point or first step respectively it is expedient to be used.

The reason why the SIM applies the income approach initially and not after the qualitative evaluation is clarity. As every future-related monetary valuation must, since it constitutes an estimate, by necessity arrive at a value spread instead of a fixed outcome,<sup>560</sup> it appears to be more logical to first of all establish the spread by a monetary means (income approach, DCF and decision tree analysis) and to subsequently (using the value spread as a basis)

557 An explanation of this definition can be found above at 3.2.2.1.3.

558 *Supra*, 3.2.2.1.3 and 3.3.2.

559 Above at 3.2.2.1.3.

560 Cf. e.g. *supra*, 1.2.

compute a most likely expected value, based on a more comprehensive, contextual qualitative evaluation process. Thereby, the qualitative evaluation, which distinguishes the SIM from other valuation tools, can be used to its full potential, since usefulness of the end result increases with a decrease of the size of the value spread.<sup>561</sup>

As the income approach per se merely states that the sum of all future income streams derived exclusively from the asset (in their expression at the prospective time at which they are estimated to accrue) equals its value, it does not allow for expression of these streams in terms valid at the time of valuation (it is fragmentary anyway, as it merely constitutes an approach and not an adequate method or methodology). Hence, it needs to be combined with the discounted cash flow (DCF) method, which allows the future income streams to be discounted to a net present value (NPV).<sup>562</sup> It follows that the income approach, combined with the DCF method, allows the respective estimated future income streams to be expressed in monetary terms as of the time of valuation – a step indispensable for every valuation seeking a monetary outcome. How this is carried out has been elaborated in detail in chapter three,<sup>563</sup> which shall be referred to at this point instead of reiterating this information here.

For purposes of the SIM, the DCF calculation is combined with a decision tree analysis. This enables the valuator to take different estimated risk scenarios into account – an important advantage with respect to intellectual property rights the value of which is strongly influenced by a number of risk factors.<sup>564</sup> A decision tree allows the appraiser to run through a best and a worst case scenario (and more possibilities if so wished), arriving at a minimum of two financial values representing these scenarios. Hence, it is a proper tool to define the financial value spread.

The actual calculation steps of any discounted cash flow and decision tree analysis are the same, in whichever context they are applied. What differentiates the SIM greatly from other IP valuation tools is the instance that it

561 This *modus operandi* may not be the only one in order to arrive at a high-quality end result in the course of a strategic IP valuation. However, it combines an established instrument with a newly developed one in a logical and practical way which allows the valuator to arrive at a comprehensive and highly useful outcome.

562 Cf. 3.2.2.1.3.

563 Above at 3.2.2.1.3.

564 For more background information and on how a decision tree analysis is carried out, see *supra* at 3.2.2.1.3.

specifically uses such financial analysis in order to assess the obligatory value spread and that it merely applies it as a first step which it supplements with a qualitative analysis in a unique fashion.

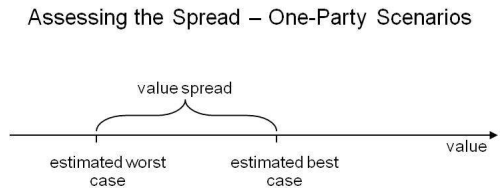
How the value spread is determined by means of income approach, DCF and decision tree analysis will be explained in the following.

4.1.1.2 Assessing the Spread

One can distinguish two subgroups of forecasting valuation scenarios: situations with two or more parties, such as licensing negotiations, and those in which value is seen merely from one viewpoint, for instance evaluation for resource allocation purposes within the respective company.

4.1.1.2.1 One-Party Scenarios

In a unilateral valuation situation, a value spread is defined by a best case and a worst case figure – the highest and lowest value respectively. Hence, income approach, DCF and decision tree analysis must be applied (at least) twice, that is to arrive at a financial figure representing the estimated best case scenario and one standing for the estimated worst case.<sup>565</sup>



*Figure 4.1: One-Party Scenarios.*

4.1.1.2.2 Two- or Multi-Party Scenarios

In the course of a scenario involving two or more parties, each side assesses the respective brand or IP asset from their perspective in any event, which results in at least two (usually diverging) conceptions of value. For tactical reasons, the parties are unlikely to communicate to the other the outcomes of their DCF and decision tree analyses. Rather, a potential buyer or licensee

565 How such a calculation is carried out in practice is described in detail above at 3.2.2.1.3 and will therefore not be reiterated here.