3.2 Analysis of Currently Applied Brand Valuation Methods

In order to see whether the present retentiveness vis-à-vis actual performance of brand valuation is justified and, if yes, to elaborate what could be improved and how, some of the currently applied brand valuation methods will be analysed in the following.

3.2.1 Introduction

For these purposes, an exhaustive treatment of all available or commercially applied brand valuation routines needs not be carried out. It has already been provided by a number of other studies.[386] More importantly, such broad overview would not add extra value in light of the purposes of this work.[387] Keeping in mind that this contribution is aiming at, amongst others, illuminating fundamental coherences of brands and their value, providing both an analysis of the vital issues common to all brand valuation tools and an exemplary analysis of methods currently most popular in German and European practice in order to set out general trends and issues is both sufficient and expedient.

3.2.1.1 Selection Criteria

Two to three brand valuation methods in each category of techniques (financial, customer-related and hybrid) will be presented and analysed. Such exemplary approach will be used to illuminate positive and negative aspects characteristic to each class of models.

The methods' selection is based on both their practical significance and their degree of elaboration.

386 *Bentele/Buchele/Hoepfner/Liebert*, Markenwert und Markenwertermittlung; *Esch/Geus*, Ansätze zur Messung des Markenwerts; *Frahm*, Markenbewertung. Ein empirischer Vergleich von Bewertungsmethoden und Markenwertindikatoren; *Hanser/Högl/Maul* (ed.), Markenbewertung. Die Tank AG; *Künzel*, Die Marke und ihr Wert; *Sattler*, Markenbewertung: State of the Art; *Schimansky* (ed.), Der Wert der Marke; *Zednik/Strebinger*, Marken-Modelle der Praxis. Darstellung, Analyse und kritische Würdigung; *Zimmermann/Klein-Bölting/Sander/Murad-Aga*, Brand Equity Excellence, Volume 1: Brand Equity Review, pp. 31 et seq.

387 As defined at 1.1.1.

3.2.1.1.1 Practical Significance

Since the author's systematic integrated methodology which will be introduced in the following chapter is a brand (and IP) valuation methodology specifically created for practical application, it is reasonable to choose methods currently applied in practice in order to reach a maximum degree of comparability. Therefore, methods which are being applied relatively often have been selected for scrutiny hereafter.

In this connection, the abovementioned surveys were relied upon for guidance. Even though they are not fully representative, they provide a useful overview of past and current practical brand valuation trends. Groups of relatively popular valuation methods can thus be separated from methods rarely mentioned and applied. The most popular tools in each category are candidates for closer scrutiny.

3.2.1.1.2 Sufficient Elaboration

Out of these groups, only those valuation techniques can be analysed in detail with respect to which enough data is available.

Every scholar and practitioner analysing brand valuation methods (other than internally developed ones) faces the problem of data shortage. This is due to the fact that such analysis is and can only be based on publicly available information. The crux of the matter is that, in consequence, proprietary valuation models cannot be examined in all their facets. Therefore, every analysis is necessarily skewed to some degree. However, it is comprehensible that the inner life of such methods is not completely revealed since they are applied by practitioners for a living and therefore need to constitute a business secret to some extent. For our purposes, this situation has given rise to a selection of not only practically significant but also relatively well documented methods for assessment. Hereby, the problem of data shortage is being mitigated to an acceptable degree.

3.2.1.2 Assessment Criteria

A number of criteria a future-related valuation method should meet and needs not meet respectively have been elaborated in chapter one.[388] In consequence,

these criteria need to and will be used in this chapter to scrutinise currently applied brand valuation tools, as well as in chapter four to examine the newly introduced methodology.

3.2.2 Financial Techniques

Financial brand valuation methods hold an exceptional position since one needs to distinguish the general valuation approaches they are based on from the many generic and proprietary methodologies which have been developed from these approaches. Therefore, the three existing basic approaches will be introduced prior to an exemplary analysis of three specific derivative methods.

At this point, it is important to note the difference between an approach, a methodology and a method. An approach describes a way of solving a problem or addressing an issue in general or preliminary terms.[389] It may serve as a conceptual basis for a number of methodologies and methods,[390] which present specific and detailed procedures and techniques of problem solving. Approaches therefore need to be discussed before attention is focussed on methodologies and methods. Whereas a method constitutes a technique for doing something, a methodology consists of more than one such methods.

3.2.2.1 The General Approaches

The three basic financial approaches to valuation are cost, market and income approach. They have been used for all assets, including IP, over circa the past twenty years and form the basis of almost all[391] the many financial valuation

388 At 1.4.

389 According to the Merriam-Webster Online Dictionary, an approach is "the taking of preliminary steps toward a particular purpose". Oxford Advanced Learner's Dictionary defines an approach as (amongst others) a "way of dealing with a person or thing".

390 The Merriam-Webster Online Dictionary defines a method as "a procedure or process for attaining an object: as [. . .] a way, technique, or process of or for doing something" and a methodology as "a body of methods, rules, and postulates employed by a discipline: a particular procedure or set of procedures". According to Oxford Advanced Learner's Dictionary, a methodology is a "set of methods used" and method as a "way (of doing sth.)".

391 Except a small number of financial market oriented methodologies such as the 'Stock Market Model' by *Simon/Sullivan*, cf. *Simon/Sullivan*, 12 Marketing Science, iss. 1, 28 (winter 1993). These techniques could be subsumed under 'market based methods' yet hold a somewhat exceptional position since they are not based on a market value

methods and methodologies currently in place. Particularly one of them, the income approach, is widely used both in its original form and as a basis for specific generic and proprietary valuation methods.[392]

The three basic approaches originate from valuation of tangible assets, especially of companies,[393] yet have found their way into intangible asset valuation which entails a number of particular problems and issues.

3.2.2.1.1 Cost Approach

The cost approach is based on the assumption that value of an asset is reflected by the monetary cost incurred acquiring or producing it.

Using the cost approach, it has to be asked what the historic cost[394] of the brand under valuation is, i.e. sunk cost[395] caused directly by the brand in question up to the time of valuation such as cost for development and registration of the trade mark, marketing etc. This cost approach in its basic form functions solely with historic data.[396]

There are two variations of this basic form of the cost approach which function with current instead of historic data. One is operating with replacement cost, the other with reproduction cost. Replacement cost is the cost it would take to obtain a similar asset with equivalent utility at the time of valuation.

of the respective brand but of the company as a whole, from which brand value is derived. As such methodologies can only be applied on stock exchange listed firms and hardly play any practical role in Europe and Germany, they are not discussed in this work. However, issues pertaining to the market approach as discussed below also apply to stock market based tools.

392 A number of publications, especially from the 1990s (e.g. *Smith*, Trademark Valuation (1997)), solely discuss cost, market and income approach with some derivative methods of the latter like the relief from royalty or discounted cash flow methods. It seems that the development of hybrid (financial-psychographic) brand valuation methods did not gain ground considerably before circa the turn of the millennium.

393 *Ballwieser*, Unternehmensbewertung – Prozeß, Methoden und Probleme, pp. 8-11; *Franzen*, DStR 1994, 1625, 1626 et seq., *Esch/Geus*, Ansätze zur Messung des Markenwerts, p. 1281.

394 This is also called trended cost, see *Anson/Suchy*, Fundamentals of Intellectual Property Valuation: A Primer for Identifying and Determining Value, p. 65.

395 Sunk costs are fixed, i.e. one-time, past expenditures which are unrecoverable, regardless of future events, cf. *Silbiger*, The 10-Day MBA, p. 51.

396 The lion's share of all historic cost relating to brands does not arise before the trade mark is actually registered but in the time after grant. It is not the expenses necessary to get the trade mark registered and the signage developed etc. but the brand management cost, i.e. expenses for building, developing and maintaining the brand image (such as advertising) and for keeping the trade mark alive that account for the major share in overall cost accruing from a brand.

Reproduction cost is the cost one would have to spend to duplicate, or recreate, the asset today. The duplication would have to be an exact replica of the asset.

An advantage of the basic, historic form of the cost approach is the fact that it is, in general, relatively easy to handle since most cost factors will be known within the respective firm, at least in cases of one brand being allocated to one product.[397] Even in this context, however, the multitude of items which would ideally have to be included in such a calculation, especially with respect to large brand development or R&D projects, makes it very difficult to arrive at 'true' costs.[398]

Computing replacement or reproduction cost of intellectual property assets generally faces more difficulties than of tangible, especially mass-produced, goods. Replacement and reproduction cost of tangible goods can in many cases be assessed using market data in case internal data collection does not yield adequate results.[399] Due to their typically unique character, obtaining a similar IP asset with equivalent utility is hardly possible. As IP assets are highly contextual, assessing all factors which would play a role in their fictitious duplication or recreation would involve considerably more guesswork than with respect to many types of tangible assets such as fast moving consumer goods (the reproduction cost of which is relatively well documented).

The biggest question mark regarding the cost approach, however, is the issue of how valid the link between cost and value of an asset in fact is. The cost approach functions by totalling financial resources which were used to build and develop the asset. One could at best say that these sums reflect a value the asset had for the proprietor in foretime while spending these sums of money. The cost approach therefore is exclusively focussed on the past and consequently does not give a valid indication as to a present or future value. A company may have spent millions of Euros on research and development for

397 As mentioned above, problems may arise in case of corporate brands or in situations where the item of expenditure is of such general nature that only part of it is attributable to the brand in question. In this latter case, the brand specific cost would have to be separated from overall cost. This process would be likely to entail considerable difficulties.

398 Cf. *Razgaitis*, Valuation and Pricing of Technology-Based Intellectual Property, p. 51.

399 The underlying critical difference of tangible and intangible asset is – as explained at 2.1.1.3.4 – the fact that tangible assets are in general characterised by marketability whereas intangible assets such as intellectual property fail to be traded on publicly accessible markets.

a pharmaceutical patent or the development of a brand in the past, deeming the invention or brand valuable at that time, hoping for big potential, success in clinical trials, a huge market for the patented and branded products and so forth. In case the project turns out to be unsuccessful or to underperform, the respective patent or brand can nevertheless only be worth nothing or merely little today due to the absence of a (fruitful) possibility to exploit it. However, a valuation using the cost approach would nonetheless give it an expensive price tag. Should the plans be crowned with success, the proprietor would be very unskilful if he valued the respective assets merely at their cost level, as they would yield considerable return on investment.[400]

In addition, with respect to brands in particular, the cost approach is inherently unsuitable due to the fact that it does not allow for operationalisation of future success potential of the scrutinised brands through strategic options such as brand extensions, which is a significant factor contributing to their utility and therefore to their value.[401]

Hence, the cost approach is suitable in cases of past-oriented situations of valuation. These are, in particular, accounting and other reporting purposes as well as tax functions. With respect to future-oriented strategic valuations this work is dealing with,[402] cost has very little to do with the actual value of an asset. In some instances, the cost approach could be used as no more than a rough indicator of value[403] if obsolescence factors are accounted for[404] yet in general the cost approach is not suitable at all for future-oriented valuations.

3.2.2.1.2 Market Approach

Valuation using the market approach is carried out by finding transactions regarding equivalent assets in markets same or equivalent to those of the asset to be valued. Market value can be defined as the estimated amount for which an asset should exchange on the date of valuation between a willing buyer and a willing seller in an arm's length transaction (after proper marketing and wherein the parties had each acted knowledgeably, prudently and without

400 *Razgaitis*, Valuation and Pricing of Technology-Based Intellectual Property, p. 49.
401 *Sattler/Högl/Hupp*, Evaluation of the financial value of brands, p. 11.
402 See above, 1.2.
403 For example as an upper limit of value, cf. *King*, Valuation, p. 75.
404 Such factors include deterioration (physical and otherwise), legal, functional, economic and technological obsolescence.

compulsion).[405] In order to arrive at such a value, the appraiser will have to compare market data on assets akin to the one under scrutiny. Hence, an active, sufficiently transparent market with at least a few comparable arm's length transactions is needed to arrive at a workable value figure.

In case such data is provided, for example with respect to shares publicly traded on the stock market, the market approach can provide solid valuation outcomes since the monetary figure for which two parties are willing to exchange an object is a proper materialisation of the utility the asset brings about for either side and therefore of its value. This is why the market concept of value is the most common type of value associated with tangible property.[406]

Here lies the crux of this approach: Only regarding a number of tangible or financial assets, e.g. real property, fast moving consumer goods or publicly traded stocks, will there ever be enough transparent transactions to bring this approach to a reasonable application. For intellectual property assets themselves,[407] this approach is almost completely unemployable. Intangible assets are not traded frequently enough to provide useable data.[408] In cases such transactions take place, details are usually kept secret, with the result that no open markets exist. What is more, even if information regarding such transaction was revealed, the fact that intellectual property rights and assets are inherently unique (to varying degrees) impedes their theoretical comparability in a market situation.

One could at best use licensing data,[409] bearing in mind that there is no such thing as exactly comparable licensing information, especially with regard to intellectual property assets. The reason for this is that intellectual property assets are inherently contextual and unique. One would hardly ever be able to find two comparable intangible assets,[410] let alone licensing information

405 *International Valuation Standards Committee*, International Valuation Standards, p. 27.

406 *Ibid.*, p. 26.

407 And not the tangible goods related to them, such as branded products, goods manufactured using patented technology or tangible media of expression on which copyrighted content is fixed such as books.

408 Cf. 2.1.1.3.4.

409 This is called the 'licensing analogy' approach which will be discussed below at 3.2.2.2.2.

410 This applies especially to brands since their degree of utility is highly dependent on the proprietor. The situation is slightly less precarious with respect to patents, yet the basic problem remains the same.

with respect to such assets.

Furthermore, a transaction price, whether derived from an outright sale or a licence, does not necessarily reflect the value of the respective asset. The proprietor may, for instance, be inclined to give the contractual partner a better deal than he would give other potential parties due to personal or business strategic objectives. In addition, special warranties or indemnities may have been included in the contract or tax considerations may have played a role in setting the payment size. It follows that the numerous available publications on royalty rates generally applied in certain industry branches[411] must be treated with caution. Relying exclusively on such information would entail considerable danger of misevaluation of the asset. Furthermore, inclusion in such a publication of data regarding a transaction for which information from such a list has been used could in turn perpetuate the abovementioned shortcomings throughout the respective industry.

Hence, the only case in which the market approach may work with respect to an intellectual property asset is a resale or repeated licensing of a previously sold or licensed asset, in temporal proximity to the previous sale or licensing deal and under similar circumstances.

3.2.2.1.3 Income Approach, Discounted Cash Flow and Decision Tree Analysis

The income approach focuses on future benefit the proprietor is able to derive directly from the asset in question. According to this approach, the sum of all future income streams derived exclusively from the asset equals its value. Pre- or post-tax income usually function as income measures.[412] Unlike the cost approach which takes historic data to arrive at a value, the income approach works with estimated future parameters to calculate future financial benefit. The income approach is very popular in practice because estimated future income streams are felt to reflect the intrinsic value of an IP asset much

411 See for example *Groß*, WRP 2003, 1199; *Battersby/Grimes*, Licensing Royalty Rates and online services (subject to a charge) such as Royaltystat (http://www.royaltystat.com/ – last accessed January 25, 2007), Royaltysource (http://www.royaltysource.com/royaltyrates.html – last accessed January 25, 2007) and KnowledgeExpress (http://www.knowledgeexpress.com/ – last accessed January 25, 2007).

412 *International Valuation Standards Committee*, International Valuation Standards, p. 191.

better than a historic look at expenditures made with respect to the asset in the past.

Even though this approach therefore bears the potential to be viable for strategic valuations, there is a number of problems associated with it. The circumstance that the income approach seeks to arrive at a monetary figure reflecting all future income streams derived from the IP asset in question implicates that the valuator is tasked with separating this exclusive income stream from all other income streams, primarily from the income stream associated with the branded good or service itself. In case of brand valuation, for example, the appraiser must separate the earnings which are attributable to the respective brand only (this will largely be sales earnings) from the remaining overall earnings of the business. This is an issue especially pertinent to intellectual property and other intangible assets, since such assets, in most scenarios, only generate cash flows in combination with other assets. For instance, a pharmaceutical patent can, through product sales, generate cash flow and income in combination with the machinery used to produce the respective pharmaceutical product or a brand can do similarly in combination with a branded product. On application of the income approach to a brand, one needs to look at the extra value brought about by the brand only, the so-called brand-specific earnings.[413] The dependence on other assets for cash flow generation often makes the isolation of these figures very demanding, if not impossible.

Moreover, the income approach in its pure form does not allow for establishment of a present and therefore workable figure of value, since the valuator is looking at estimated future income streams in their expression at the future time at which they are estimated to accrue.[414] This problem is solved

413 Note that these are computed using the respective brand-specific cash inflows and cash outflows. Due to the fact that the brand proprietor may be in a stronger bargaining position both on the buy and the sell side than without the brand, brand-related savings with respect to e.g. raw material that the proprietor needs to buy must be included in the equation.

414 The major benefit the income approach brings about vis-à-vis cost and market approaches is its future orientation brought about by the employment of future income streams. For example, a toy manufacturer is estimated to earn € 100,000 in the upcoming fiscal year and € 150,000 in the year thereafter due to a certain brand. However, these figures express the worth of the respective income at the respective future date. As will be seen below, future money does not have the same value as present money. In order to be able to value the brand today, one therefore needs to turn these future figures into a figure representing those values today, at the time of valuation.

by a variation of the income approach, the so-called discounted cash flow or DCF method.[415] It allows the valuator to discount, i.e. use a certain interest rate on, the future revenue streams associated with the relevant IP to a net present value (NPV) and thereby to arrive at a present value figure he can work with. In other words, the appraiser is able to express all relevant estimated future revenue streams in a value parameter related to the time of valuation. Since income approach and DCF method have to be necessarily intertwined in order to arrive at a present value figure, the DCF method will be briefly introduced in the following paragraphs.[416]

The DCF method is based on the fundamental rule that money loses value over time, or – in other words – present money is more valuable than future money. This is due to two influencing factors: inflation and risk, i.e. uncertainty regarding future developments.[417] This type of uncertainty, for example regarding a possible shortage in crude oil, makes investments, i.e. the transformation of monetary (liquid) capital into real (fixed) capital, risky. Invested money may be increased, kept at the original level or even lost. As a general rule, this risk, together with inflation, makes investors prefer liquidity over investments.[418] In consequence, once they have in fact invested, investors will always demand a rate of return on that investment reflecting the degree of risk involved. In a DCF calculation, it is the interest rate which reflects such risk.

In general terms, the value of an income stream x received in t years from the time of valuation will be worth v(x) at the valuation time, or

$$v(x) = \frac{x}{(1+d)^t}$$

415 In fact, the income approach in its basic form and the DCF method are oftentimes not distinguished at all but discussed as one unit under the denotation 'income approach'. This is dogmatically wrong but reflects the fact that the income approach is nearly always used and only makes sense for valuation purposes in that form, i.e. discounting the estimated future income streams to be represented as a current value.

416 Should the reader wish to learn more about the DCF method, he will find detailed information in sources such as *Audörsch*, Moderne Bewertungsverfahren für Aktien, chapter 4.2; *Geddes*, An Introduction to Corporate Finance. Transactions and Techniques, pp. 189 et seq.; *King*, Valuation: what assets are really worth, pp. 92-98 and *Razgaitis*, Valuation and Pricing of Technology-Based Intellectual Property, pp. 179 et seq.

417 *Groppelli/Nikbakht*, Finance, p. 51.

418 So-called 'liquidity preference', cf. *Brealey/Myers*, Principles of Corporate Finance, p. 680.

with d being the discount rate (also called interest rate) and e.g. 0.1 expressing a 10% rate. This equation can be used to calculate the NPV of income streams received in one period. Usually, the appraiser aims at discounting estimated future cash flows accrued during a number of years or periods, e.g. the remaining useful life of a brand.[419]

This shows that a DCF calculation presupposes a number of parameters: the size of the estimated future income stream in each period (usually per year), the number of periods (which is, in maximum, the total remaining useful life of the asset) and the interest rate.

As with respect to the income approach in its pure form, the key issue of the DCF method is the prognosis of income streams. The main problem in this context is how to separate the expected cash flow derived exclusively from the asset under valuation, e.g. a brand, from all other cash flows. Since income approach and DCF method work inextricably together and can be treated as one unit, problem and solution approaches are the same. One suggested way of solving this issue is application of the price premium method, a technique derived from the income approach, which will be discussed below at 3.2.2.2.1.[420]

The DCF method is commonly applied with respect to a five-year forecast period (data regarding which can usually be retrieved from the business plan[421]) and, if possible and necessary, a prognosed annuity related to the remaining estimated lifespan of the brand in question.[422] These two time phases constitute the remaining useful life of the respective brand.[423]

419 In order to achieve this, supposing the remaining useful life of the respective brand is four years, the equation will have to look like this:

$$v(x) = \frac{x}{(1+d)^1} + \frac{x}{(1+d)^2} + \frac{x}{(1+d)^3} + \frac{x}{(1+d)^4}$$

420 Others include mass premia, hedonic prices or the licence analogy method, cf. *Sattler*, Markenbewertung: State of the Art, pp. 12-18 and *Völckner/Pirchegger*, Immaterielle Werte in der internen und externen Berichterstattung deutscher Unternehmen – Eine empirische Bestandsaufnahme, p. 11. Licence analogy which will be introduced below at 3.2.2.2.2.

421 *Ehrler*, Ein DCF-Modell zur Markenbewertung, p. 76.

422 *Interbrand Zintzmeyer & Lux*, Brand Valuation. The key to unlock the Benefits from your Brand Assets, p. 2.

423 This is, as a general rule, the shorter of the economic life (i.e. the period in which the asset is expected to yield economic return) or the legal life (i.e. the period during which the asset is legally protected), cf. *International Valuation Standards Committee*, International Valuation Standards, pp. 191/192. Other than in the case of patents, for

Even though one may infer from a preliminary look at the theoretically infinite legal life of trade marks that brands have an infinitive useful life,[424] this cannot be said to be a valid statement as a general rule. As brands live in the minds of the target audience who would forget about brands if there were no repeated contacts with them over time, brands need to be kept alive by application of marketing instruments such as introduction of new product lines and advertising.[425] In most cases, therefore, market and product life cycle analyses show a limited remaining useful life of the brand in question.[426] The time span during which the respective brand is intended to be used is also crucial for the assessment of its remaining useful life. This can differ considerably depending on the type of brand involved. A single or product brand

which the remaining useful life is easy to obtain due to their temporally limited legal life (patent protection lasts, as a basic rule, for 20 years from the filing date, cf. § 16(1) first sentence PatG; Art. 63(1) EPC. A so-called supplementary protection certificate (SPC) extends the duration of a pharmaceutical patent for a maximum of five years since products related to such patents need to undergo official approval before they are allowed to be marketed. The SPC is aimed at providing a time compensation since such approval procedures can take several years, the patent protection term already runs during such approval phase and most pharmaceutical patents only yield a positive return on investment (if at all) in the extended duration granted by the SPC. SPCs are governed by e.g. § 16a PatG and the Council Regulation (EEC) No. 1768/92 of 18 June 1992 concerning the creation of a supplementary protection certificate for medicinal products (Official Journal L 182 of July 2, 1992).), the situation is very difficult with respect to brands, since the underlying trade marks can be theoretically renewed ad infinitum (textsection 47(2) MarkenG; Art. 46 CTMR). The oldest trade marks in the German register, for instance, are more than 110 years old (one of the oldest German trade marks registered for Nice classes 1 and 5 is the word mark SALOL listed under number 5967, bearing the filing date of October 1st, 1894, the registration date of May 2nd, 1895 and belonging to *Bristol-Myers Squibb GmbH* in Munich). Since the legal life of trade marks is theoretically infinite, the abovementioned general rule does not apply (save in cases where it is certain that the respective trade mark will not be renewed), which bears the consequence that the economic life must be resorted to. This is much harder to assess than a limited legal life, where available, since estimating the time span during which an asset is expected to give return generally brings about considerably more uncertainty than assessing its legal (statutory) protection term. The circumstance that a brand can live on without the trade mark being legally protected (see chapter two at 2.1.2.) also shows that the legal life of a trade mark contains little information on the remaining useful life of the respective brand. It almost completely disconnects the search for a reasonable useful life figure from legal questions regarding duration of protection (except for those cases in which the trade mark proprietor clearly intends not to renew the mark (with respect to registered trade marks) or not to use the mark in the future respectively (in case of well-known marks)).

424 Brands are in fact frequently claimed to have indefinite useful economic lives, cf. *Brand Finance*, Implications of the new international accounting standards for intellectual property owners, p. 2.

425 Cf. *Greinert*, BB 2004, 483.

426 *Institut der Wirtschaftsprüfer (IDW)*, Entwurf IDW Standard: Grundsätze zur Bewertung immaterieller Vermögenswerte (IDW ES 5), p. 17.

the respective products of which shall only be used for a limited time span and which shall not be transferred to similar products has a relatively limited useful life compared to an umbrella or company brand the use of which does not depend on the life cycle of a specific product or service line.[427]

It follows that the economic life of a brand needs to be determined on a case-by-case basis. Important factors influencing such analysis include product life cycles, the time span in which management intends to use the brand, to keep it alive through producing branded goods/rendering branded services and to maintain it using marketing means which sustain the brand in the minds of the target audience.

As mentioned above, the discount rate reflects the risk associated with the respective estimated cash flow. It is composed of a risk-free rate and a specific risk rate. The risk-free interest rate can be obtained by investment in financial instruments with no default risk.[428] Since truly risk-free interest rates are a theoretical construct, practitioners use short-dated bonds of the respective currency.[429] The risk rate is a crucial factor in any DCF calculation. A modification of as little as .5% may cause considerable differences in value outcome, since income streams are estimated and discounted over a number of years. However, in the course of a rather 'mechanical' and unilaterally financial tool like the DCF method, the valuator does not have the chance to collect all salient data for a comprehensive risk assessment which would lead him to an appropriate discount rate.

In order to make the discounted cash flow projections more robust, especially in a setting like valuation of intellectual property which involves a relatively high degree of risk, the so-called decision tree analysis can be deployed. Specific risks associated with certain alternative future cash flow scenarios are identified and dealt with using a probability weighting.[430] All available alternatives are then visualised by means of a decision tree, within which estimated future events and activities are illustrated using forks (which look like branches of a tree). The best alternative can then be computed.[431]

427 *Greinert*, BB 2004, 483, 486.

428 However, the financial instrument may carry other risks, e.g. market and liquidity risk.

429 For Euro investments, German government bills or EURIBOR (Euro Interbank Offered Rate, a daily reference rate based on the averaged interest rates at which banks offer to lend unsecured funds to other banks in the Euro wholesale money market) rates are commonly used since the risk of a Government or the European bank system defaulting is estimated to be extremely low.

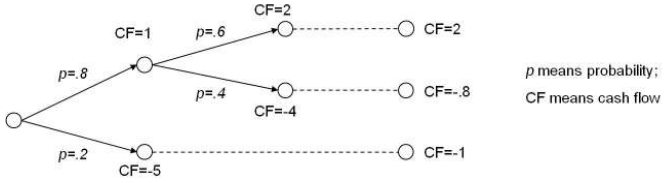
430 *Woodward*, Valuation of intellectual property, p. 3.

Since a decision tree analysis can only be as good as the underlying data, it is not a method for finding out new alternatives but rather a solid means of untangling complex future scenarios by visualising the likelihood of the respective foreseen alternatives. In the context of a DCF analysis, a decision tree enables the appraiser to calculate a probability-adjusted cash flow, which reflects inherent risks considerably better than a mere calculation of one alternative cash flow scenario. It should therefore be part of every income approach and DCF analysis.

The income approach in its pure form, that is without DCF and decision tree analysis, impresses with its future orientation. It thus contributes to attaining a manageable valuation outcome and thereby meets one fundamental requirement of all strategic valuations. However, it is not until discounted cash flow calculations and decision tree analysis come into play that this approach demonstrates general capability of being reasonably utilised for strategic intellectual property valuation. Discounted cash flow analysis allows estimated future income streams to be expressed in monetary terms valid at the time of valuation. Decision tree analysis enables the appraiser to calculate not just one but all estimated future scenarios. This, due to combination of factual and monetary forecasts, can be utilised in the course of strategic decision making. What is more, such approach is not just transparent and relatively easy to handle but also widely applied.

However, this cannot belie the fact that its output is not fully conceptually and methodically sound with respect to purposes of strategic evaluations. It covers merely one side of value, the financial one. Estimation of future income streams and risk rate determination do not reflect non-financial, qualitative value influencing factors such as legal strength of the trade mark or brand

431 The following decision tree is a simplified example visualising the 80:20 chance that the market will develop well in a certain country (first fork) and a 60:40 chance that a certain branded product will sell as expected (second fork).



In the most likely event, forecast cash flow will be .8 times 1 plus .6 times 2, which equals 2. In the least likely event (negative market development), forecast cash flow will be .2 times -5, or -1. The value of the respective brand would be estimated (again, in a considerably simplified way) at .2 (adding up the results of all possibilities).

strength.

It follows that the income approach, coupled with discounted cash flow calculations and decision tree analysis, is a solid means of dealing with future-related IP valuations, at least from a purely financial point of view. It resembles the concept of value more closely than the cost approach and – with respect to intellectual assets – also more closely than the market approach.

The fact that the income approach has a long history of being utilised in valuation of assets other than intellectual property is, on the one side, advantageous since it gives valuators the opportunity to fall back on a known procedure for assessment of a relatively new asset class. On the other hand, this seems to bar the fact that intellectual property (e)valuation can only succeed with a contextual modus operandi, including examination of value determinants other than financial ones, from winning adequate recognition.

3.2.2.2 Derivative Generic and Proprietary Methods

All financial generic and proprietary brand valuation models are based on and contain some reference to one or several of the general valuation approaches just introduced.[432]

With respect to financial brand valuation, the abovementioned surveys indicate practitioners' fondness for both the market and particularly the income approach in their conventional form.[433] Some generic variations of the income approach are relatively popular whereas proprietary methods seem to attain very little market share.

Since the three general approaches have been illuminated above, two generic variations (the price premium and licence analogy/relief from royalty methods) and one proprietary tool (WoReWert® by *Repenn*) have been selected for scrutiny, based on – as a general rule – distribution rates according to the abovementioned surveys.[434] The price premium approach attained the

432 They can therefore be theoretically sub-categorised into three groups (cost-, income- and market oriented methods). However, this is not further pursued in this study since the increased degree of comparability obtained would be outweighed by excess complexity.

433 As seen above, the income approach per se has gained the highest distribution rate of all financial brand valuation methods. Determination of brand related profit was deployed by 40.3% and examination of brand related revenue by 23.9% of all queried experts, cf. 3.1.3.5.

highest distribution rate of all variant forms of either of the three general approaches, that is a distribution rate of 17.9% (*Günther* et al.) and 29.6% respectively (*Völckner* et al.). The licence analogy/relief from royalty method came second, reaching a market share of 11.1% (*Völckner* et al.). None of the proprietary financial techniques have achieved notable popularity in the course of the abovementioned surveys. Hence, the valuation tool by *Repenn* has been selected on the basis of data availability only.[435]

Like the three general approaches, the two generic methods which will now be discussed are used for all kinds of IP assets. By contrast, the proprietary tool has been specifically developed for trade marks.[436]

3.2.2.2.1 Price Premium

Brand valuation under application of the price premium method defines brand value as the excess amount which consumers are willing to pay for a branded product or service versus an unbranded one. In other words, this technique is based on the assumptions that a brand allows its proprietor to demand a price premium compared to unbranded products and that this premium alone reflects the brand's value. This assumption rests upon consumers' brand perception mechanisms since preference building and customer retention are the basis for assertion of a price premium, bearing in mind that

434 Other generic financial brand valuation techniques (of which some are mostly being used for accounting purposes) include the cost savings method, the excess operating profits (see *Woodward*, Valuation of intellectual property) or multi-period excess earnings method (Residualwertmethode) (cf. *Hanser/Högl/Maul* (ed.), Markenbewertung. Die Tank AG, p. 52), the incremental cash flow method (Mehrgewinnmethode) and the real options pricing method. Further proprietary financial brand valuation methods include the pricing model by *Blackston*, licence based brand valuation or VALMATRIX® by *Consor*, *Crimmins'* pricing model, the TESI pricing model by *Erichson*, the momentum-accounting approach by *Farquhar/Ijiri*, the Customer Value Method (RoCS Model) by *Fischer* et al., the market value model by *Herp*, the cash-flow method by *Kapferer*, the brand value formula by *Kern*, *Sander's* hedonic pricing model, the stock value model by *Simon/Sullivan* and others. Cf. fn. 386 for references. Note that the book 'Markenbewertung. Die Tank AG' contains a chapter called 'KPMG-Model'. This caption can be misunderstood since no proprietary method is introduced yet a few generic variations of the income approach are applied.

435 The WoReWert® tool is – amongst others – documented in *Bentele/Buchele/Hoepfner/Liebert*, Markenwert und Markenwertermittlung, pp. 53 et seq., *Repenn/Weidenhiller*, Markenbewertung und Markenverwertung and *Zimmermann/Klein-Bölting/Sander/Murad-Aga*, Brand Equity Excellence, Vol. 1: Brand Equity Review, pp. 34-35.

436 *Repenn/Weidenhiller*, Markenbewertung und Markenverwertung, p. 90.

brand-oriented consumers generally show lower price elasticity of demand[437] compared to consumers paying little or no attention to brands.[438]

However, customer-related non-financial factors do not play a role in the actual computation of brand value in the framework of the price premium method. In essence, this method has emerged as an attempt to solve the problem of separating brand-specific earnings from all other earnings for purposes of income approach-based calculations.

A price premium is computed by subtracting sales earnings accrued from a comparable unbranded product or service from earnings accrued from the respective branded product or service. Earnings from the unbranded item are seen as representing the value of the item only, since no additional branding is said to be involved. Hence, by subtracting these figures from sales earnings accrued with respect to the branded item the appraiser arrives at a figure representing the value of the brand only.

As a relatively straightforward tool (at least in theory), the price premium method is intuitively appealing. Required sales price data is publicly available.[439] This makes the price premium method easier to use and more transparent than others. Furthermore, it is replicable, future oriented and provides the valuator with a monetary outcome.

However, having to find a comparable unbranded product or service for every brand to be valued often proves difficult.[440] At this point, the theoretically attractive price premium method shows its main and substantial defect. In fact, the search for unbranded items is a fiction. There may be products or services of comparable quality on the market yet even if they were branded with a 'no name' brand, they still would be branded. Nevertheless, some regard such items as unbranded. However, this ignores the fact that cheap or 'no name' brands are in fact complete brands with some value. There are no completely unbranded goods or services on the market.[441] Especially the so-called 'store brands', the respective products of which some treat as

437 The term price elasticity of demand stands for buyers' responsiveness or sensitivity to changes in price (cf. *Silbiger*, The 10-day MBA, p. 294). See above at 2.1.2.2.3.

438 Hence, price premia are proxies for the elasticity of demand, cf. *Simon/Sullivan*, 12 Marketing Science, iss. 1, 28, 29 (winter 1993). Q.v. *Aaker*, Management des Markenwerts, p. 19.

439 Competitors will in general be able to compute sales earnings from such data. Contrary to this, sales volume data is not always freely available.

440 *Esch/Geus*, Ansätze zur Messung des Markenwerts, p. 1283.

441 *Stucky*, Interbrand-Modell, p. 106.

unbranded, have gone through a considerable image change in recent years. Even though products marked with such brands are positioned in the low-price segment, consumers increasingly perceive brands such as CIEN or JA![442] as representing a worthwhile value for money quality. Hence, at least some of such brands have left the realm of brands with very little value and represent their very own 'value for money brands' segment.

In addition, price premia, in most cases, result from high-quality physical attributes of the respective product, as well as from brand-related factors, and not solely from the brand itself.[443] Not only does this make the detection of a comparable unbranded product intricate, it also shows that a price premium method will in general arrive at too high estimates of brand value unless there is adjustment for the difference in production cost.[444]

What is more, the assumption that the price premium alone reflects the respective brand's value cannot be confirmed. First of all, a brand audience does not merely consist of consumers. In fact, a brand's value is also influenced by its impact on suppliers, staff and the financial community. For example, strong brands can be leveraged to lower cost of supplies and thus to raise profitability.[445] Secondly, even though the income reflected by the price premium is an important part of brand value, there are other value components which are, as such, not financial (and therefore need to be transformed into a monetary figure in the course of valuation in order to arrive at a monetary outcome), such as brand strength. The price premium technique is therefore not capable of comprehensively dealing with quantitative and qualitative contextual value drivers and distractors.[446]

It follows that the price premium method is not suitable for comprehensive strategic brand valuation, at least not by itself. As a generic variation of the income approach, it features shortcomings inherent in that approach such as the one-sided focus on financial figures. In addition, it holds conceptual drawbacks related to the fact that earnings accrued with respect to a (fictitious) comparable unbranded good or service need to be computed.

442 CIEN is a store brand used by *Aldi* and JA! is utilised by *REWE*. Cf. also fn. 129 and 2.1.2.2.2.

443 *Stucky*, Interbrand-Modell, p. 106.

444 *Simon/Sullivan*, 12 Marketing Science, iss. 1, 28, 30 (winter 1993).

445 *Haigh*, Brand valuation: what it means and why it matters, p. 21.

446 Bearing in mind that the price premium method, in essence, is an attempt to solve the issue of separation of brand-related income streams from all other income streams, this result is not very surprising.

3.2.2.2.2 Licence Analogy / Relief from Royalty

A relatively widely used approach for operationalising brand-related value streams is the licence analogy method, another generic variation of the income approach. It is based on royalty rates, customary within the respective industry, for brands comparable to the one to be valued. Hence, the value of the brand in question is inferred from royalty rates used for reference brands.

Once such a comparable royalty rate is found, brand value can be computed as the sum of annual royalty payments over the duration (in years) of the licence, less cost for creation and maintenance of the brand over the same duration.[447] This sum will have to be discounted in order to arrive at a net present value.[448] Such value shows what the future royalty payments less cost reflecting the value of the brand are worth at the time of valuation.

The so-called 'relief from royalty' technique is similar to a licensing analogy but with a theoretically different angle. It uses the fiction that the proprietor, were he not owner of the respective brand and as such relieved from paying royalties for it, would have to licence it in. The relief from royalty method operationalises brand value by projecting a fictitious value stream represented by a royalty rate, thereby determining the cost avoided through ownership of the brand. This rate is usually based on a percentage of marketplace sales or turnover.[449] Hence, the valuation process consists of first estimating the royalty fee as a percentage of sales or turnover and then projecting that fee over the remaining useful life of the brand. As a next step, one needs to compute the net present value (as above).

Either of these modi operandi, licence analogy and relief from royalty, are comprehensible and (due to their generic nature) transparent in concept and method. Like the price premium technique, they result in a monetary value figure. However, they entail a considerable number of problematic issues.

Firstly, finding one or several brands of close enough comparability will in most cases be extremely difficult. This may still be relatively well feasible with respect to fast moving consumer goods brands because there are many similar products originating from different producers or brand proprietors in this market. Yet with respect to most markets, the hurdle of regarding

447 Cf. *Fabry*, 3 Journal of Business Chemistry, iss. 3, 27, 29 (2006).
448 See above at 3.2.2.1.3 as to how this is done.
449 *Sattler*, Markenbewertung: State of the Art, p. 17.

one brand comparable to another one needs to be lowered so considerably in order to find a suitable brand that the reference brand thus found will have more differences than similarities vis-à-vis the brand under valuation. The difficulty here is, in essence, the same as with respect to the market approach, since comparable transactions or brands respectively need to be found.

Secondly, it is far from guaranteed that, if a comparable brand was found, its royalty rates have been made public. However, the licence analogy method can solely be used appropriately in cases of available licensing information from assets comparable to the one in question. Ideally, one would at least look for brands with a similar market share in the same industry and market segment which generate income streams similar to the brand to be valued. However, such detailed information is generally unavailable due to confidentiality reasons.[450] One therefore needs to rely on the few publicly available royalty rate sources which usually merely mention rates common in certain industries without providing names and other details of specific reference brands.[451] Hence, such royalty rates will in most cases be speculative and could at best be applied as a rule of thumb.

In addition, using licence royalty rates from other brands, i.e. transferring them to other than the original transaction they were used for, implies that such rates are objectively calculated or can at least be objectified. However, this neglects the fact that there can be a number of subjective tactical and strategic motivations on either side leading to the respective royalty rate.[452] For example, a licensor may want to give a certain licensee a discount on the royalty rate he would usually demand because he may wish to tie the licensee down to himself for purposes of future strategic alliances. Specific

450 There are, however, a few commercial databases containing information on current or past licensing agreements such as turnover and licensing term. An example is the brand consultancy *blueDOM* who maintain such a database for use in client assignments, cf. http://www.bluedom.ch/nav_c/nav_c.html\# (last accessed November 29, 2006). The US consultancy *Consor* seems to be using an archive with more than 8,500 entries of past licence and sale transactions for their commercial brand valuation tool, cf. *Zimmermann/Klein-Bölting/Sander/Murad-Aga*, Brand Equity Excellence, Volume 1: Brand Equity Review, p. 36. Both seem to keep the respective data secret and would find their clients a royalty rate without divulging the underlying information.

451 Such sources are available for some IP assets, especially brands and copyrights, cf. *Anson/Suchy*, Fundamentals of Intellectual Property Valuation: A Primer for Identifying and Determining Value, p. 35. There are articles published in regular intervals like the German ones written by *Groß*, e.g. in WRP 2003, 1199.

452 Cf. *Zimmermann/Klein-Bölting/Sander/Murad-Aga*, Brand Equity Excellence, Volume 1: Brand Equity Review, p. 37 and above at 3.2.2.1.2.

warranties or indemnities in the licensing agreement or tax considerations may also have a unique implication on size and type of the royalty rate. Using this royalty rate in a situation with a different brand and proprietor is of necessity inadequate.

What is more, a financial figure from a licensing situation, which logically presupposes valuation, is being used as basis for a value finding process. Yet such procedure ignores that licensing is in fact one of a number of reasons for valuation.[453] This means that the licensing object needs to be valued in order to find a royalty rate and not vice versa. Instead of deducing brand value from a royalty rate, one should rather compute and negotiate the royalty rate on the basis of the respective brand's value.

The relief from royalty method involves difficulties in case a competitor's brands are under valuation since up-to-date sales and/or turnover figures are not always publicly available.

Not least, the licence analogy or relief from royalty methods, since they are purely financial tools based on the income approach, entail problems this approach brings about. They too lack a comprehensive and contextual way of processing all the non-financial factors which have a bearing on brand value.

It follows that the licence analogy or relief from royalty techniques present considerable flaws. They can at best provide a very rough indication of the financial dimension in which brand value may be located.

3.2.2.2.3 WoReWert® by *Repenn*

For the reason that a brand does not constitute an independent property right, *Repenn*'s valuation system[454] is concerned with trade mark instead of brand value.[455]

It is based on the proposition that a valuation system must be applicable to all kinds of trade marks and many of their uses.[456] This is a promising

453 Cf. 2.3.2.2.

454 It is sometimes called 'System Repenn', yet 'System Repenn' and 'WoReWert' denote the same technique, cf. *Bentele/Buchele/Hoepfner/Liebert*, Markenwert und Markenwertermittlung, pp. 53/54.

455 *Repenn/Weidenhiller*, Markenbewertung und Markenverwertung, p. 3.

456 *Kalmbacher/Repenn*, Monetäre Bewertung von Marken. Anlässe und Methoden, pp. 13-14.

rationale, arousing the expectation of its use as basis of a truly comprehensive valuation method.

According to the WoReWert® method, trade mark value is computed by adding the 'basic value' (Grundwert), which consists of cost of creating and maintaining the trade mark, and the 'operational value' (Betriebswert), which arises from the ongoing use of the respective trade mark. The latter consists of 5% to 15% of the average annual turnover accrued within the five years preceding the date of valuation and, where applicable, licensing revenues.[457] In the case of constant turnover figures, a fixed 10% shall be used.

It needs to be positively mentioned that WoReWert® leads to monetary valuation results and is relatively easy to comprehend and apply.[458]

However, it seems to be very past and present but not very much future-oriented.[459] It operates to a considerable extent with historic data.

What is more, WoReWert® is a relatively one-sided and incomplete tool. It measures trade mark value under provision for the cost accrued for generating and maintaining the mark ('basic value') and its utilisation-related performance ('operational value'), thereby combining cost-based and income-based elements (only).[460] More importantly, as it is merely concerned with trade marks instead of brands, it is only able to cover a fraction of all the factors and characteristics constituting a brand. Consequentially, determinants which massively influence the value of a brand, such as determination of the relevant product or service market, market leadership and competition as well as the consumer perception side, are ignored.

All in all, the WoReWert® methodology does not seem to be freed from the one-sided constraints a purely financial valuation tool brings about. As it merely deals with trade marks, it cannot cover all the other vital factors of brand value. In addition, it involves a rather arbitrary and fixed percentage

457 Cf. *Repenn/Weidenhiller*, Markenbewertung und Markenverwertung, p. 91 et seq. The operational value derived from past revenues applies in the case of used marks. When valuing unused marks, an annual fixed amount based on empirical values is taken as a basis (depending on expiry of the use period).

458 *Bentele/Buchele/Hoepfner/Liebert*, Markenwert und Markenwertermittlung, p. 53.

459 *Berger*, MarkenR 1999, 271, 275.

460 The utilisation of elements from the income approach cannot belie the fact that WoReWert® is, due to utilisation of cost-based components, considerably past oriented. This is not useful for strategic valuations.