

Valuation of Business Restructurings in Germany – Part II: Economic Life of Intangible Assets

For multinational enterprises having to conduct business restructurings in Germany, the existing regulations and guidance are causing problems, including high exit charges and the risk of double taxation. One major aspect in that regard is that the German tax legislation assumes an indefinite time frame of capitalization for the valuation of business restructurings, unless reasons can be provided for a definite useful life. Empirical evidence shows that there are prudent reasons why the assumption of an indefinite capitalization period for the valuation of a transfer package, especially for whole business units, is questionable. In Part I of this short series of articles, the authors have come to the conclusion that in case of business restructurings, it seems appropriate to assume that the lifetime of a company is limited. The indefinite time frame of capitalization for the valuation of business restructurings which is codified by German tax legislation thus leads to overvaluations and non-arm's length transfer pricing, which is detrimental to the affected multinational enterprises. This second part of the series focuses on the role of intangible assets with regard to business restructurings and addresses the question of whether an indefinite capitalization period for intellectual property also leads to overvaluations and non-arm's length transfer prices.

1. Introduction

In response to changing market conditions, new technologies and new possibilities for tax optimization, multinational enterprises (MNEs) are supposed to regularly change their transnational business processes. Increasing numbers of intercompany transactions by MNEs and firm growth in the number of mergers and acquisitions lead to mixed conglomerates of intellectual property, which is challenging for tax authorities seeking to assess an appropriate allocation of profits.¹ So-called business restructurings encompass cross-border reorganizations of the supply chain, as well as the commercial and financial structures of related enterprises. These transactions typically involve

the transfer of business functions and intellectual property. Business restructurings lead to a reallocation of the profits among the group's associated parties. With regard to German tax law and international standards (OECD), the transferring company must be reimbursed by the related party. Therefore, for tax purposes, these kinds of transactions must be priced in compliance with the arm's length principle. This article will examine the influence of the economic life of companies and intellectual property on the taxation of business restructurings.

For the valuation of the transferred business function, along with the transfer of operational risk, the reallocation of the group's profits and the transfer of intellectual property, the discounted cash flow (DCF) method is applicable. In that regard, numerous variables influence the net present value of expected future cash flows. One of these variables, which has a high impact on the valuation result, is the time frame of capitalization of the transfer package.² Section 6 of the Relocation of Functions Code (*Funktionsverlagerungsverordnung*, FVerlV) assumes an indefinite capitalization period, unless evidence is demonstrated for a definite life of the transfer package. Especially for the transfer of whole business units or economically independent sub-units, an indefinite capitalization must be assumed. Common sense would suggest that the life of a company is limited. Moreover, the assumption that companies and intellectual property generate cash flows that can be projected into perpetuity seems unrealistic.

The research question is whether the assumption of an indefinite time frame of capitalization, according to section 6 of the FVerlV, leads to a transfer price at arm's length. The aim of research is to find empirical evidence regarding the finite economic life of companies and intellectual property and to apply the results to the taxation of business restructuring transactions. If the analyses of the empirical studies on the longevity of corporate companies reveal that an indefinite time frame is assumed mistakenly, it means that many business restructuring transactions are overvalued. Consequently, the tax burden for the transferring company would be higher and the risk of double taxation would increase. This scenario would not reflect a transfer price dealing at arm's length.³

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1. H.-K. Kroppen & A. Nientimp, *Generalthema I: Funktionsverlagerung*, 20 Internationales Steuerrecht 4 (2011).

2. A. Nestler & A. Schaflitzl, *Praktische Anwendungsfragen für die Bewertung bei Funktionsverlagerungen nach dem neuen BMF-Schreiben*, Betriebsberater 4 (2011).

3. J. Henshall & A. Roeder, *Business restructuring: Exit charges for restructurings in Europe*, International Tax Review (17 Dec. 2012), available at <https://www.internationaltaxreview.com/article/b1fbsck6q1sn5s/busi>

In order to pursue the research question, empirical studies about the economic life of companies and intellectual property will be identified. The applicable results of the respective studies will be outlined so that the outcomes can be used to establish the implications for the taxation of business restructuring transactions. The approach is based on a qualitative content analysis of research that helps to gather insights on the economic life of companies and intangibles.⁴

In the theoretical framework of this article, the principles and methods of international tax transfer pricing will be outlined alongside the underlying theory of the arm's length principle. Furthermore, the economics of business restructurings will be looked at in detail. Additionally, the OECD guidance and the German tax legislation on the tax treatment and valuation of business restructurings will be depicted. The theoretical framework of business restructurings for tax purposes follows an illustration of empirical studies and research approaches on the economic life of companies and intellectual property. Afterwards, the findings will be applied to the taxation of business restructurings.

2. The Economic Life of Intellectual Property

Financial capital such as money and securities make up a big part of a company's value. But the total market value of a business consists in financial and intellectual capital. Organized knowledge is used to form the wealth of a company. Intellectual capital is typically composed of human capital, innovation capital, customer capital and organizational and process capital. All these areas of knowledge create intangible assets and intellectual property that contribute a major part of the market value of a company.⁵

As the name suggests, intangible assets are non-physical. There are many different types of intellectual property.⁶ The importance of the respective assets depends on the industry in which a company operates. Intangible assets can be marketing related, e.g. trademarks or domains. Customer lists and relationships are typical customer-related intangibles. There is also technology-based intellectual property, e.g. patented technology, software or trade secrets such as specific recipes or formulas. Contract-based intangible assets include e.g. licensing and service agreements. Use rights such as water or drilling rights are also types of contract-based intangible assets.⁷

Intellectual property has a decisive influence on the value of a business, so it must be considered in the valuation process. Using the DCF approach, the remaining life-

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 ness-restructuring-exit-charges-for-restructurings-in-europe (accessed 31 Jan. 2022).
 4. M. Saunders, P. Lewis & A. Thornhill, *Research methods for business students* (5th ed., Pearson 2009).
 5. J. Vodák, *The Importance of Intangible Assets for Making the Company's Value*, 5 *Human Resources Management & Ergonomics* 2 (2011).
 6. G. Engler & C. Kachur, *Chapter O (Immaterielle Wirtschaftsgüter)*, in *Verrechnungspreise* (Vögele, Borstell & Engler eds., 4th ed., C.H. Beck 2015).
 7. S. Bragg, *Examples of intangible assets* (17 July 2021), available at <https://www.accountingtools.com/articles/what-are-examples-of-intangible-assets.html> (accessed 31 Jan. 2022).

time is an important variable because it makes a difference if excepted excess earnings from the intangible are discounted for ten years or projected into perpetuity.⁸

The International Accounting Standard (IAS) 38⁹ issued by The International Accounting Standards Board can be referred to in beginning an analysis of the economic life of intangibles. The standard differentiates between intangible assets with finite and indefinite useful life. "An intangible asset shall be regarded by the entity as having an indefinite useful life when, based on an analysis of all of the relevant factors, there is no foreseeable limit to the period over which the asset is expected to generate net cash inflows for the entity".¹⁰ Additionally, an indefinite life can be assumed if the current level of maintenance expenditure is sufficient to maintain future net cash inflows from the asset.¹¹ In order to determine the useful life of an intangible asset, IAS 38 requires the consideration of the following factors:

- a) the expected usage of the asset by the entity and whether the asset could be managed efficiently by another management team;
- b) typical product life cycles for the asset and public information on estimates of useful lives of similar assets that are used in a similar way;
- c) technical, technological, commercial or other types of obsolescence;
- d) the stability of the industry in which the asset operates and changes in the market demand for the products or services output from the asset;
- e) expected actions by competitors or potential competitors;
- f) the level of maintenance expenditure required to obtain the expected future economic benefits from the asset and the entity's ability and intention to reach such a level;
- g) the period of control over the asset and legal or similar limits on the use of the asset, such as the expiry dates of related leases; and
- h) whether the useful life of the asset is dependent on the useful life of other assets of the entity.¹²

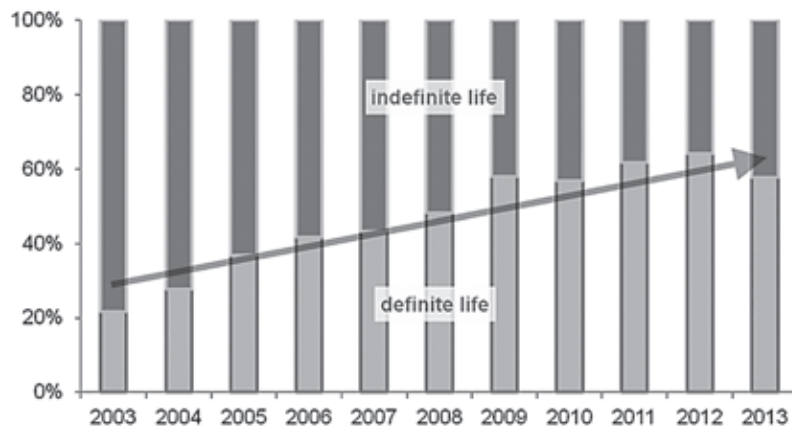
2.1. The useful life of brands and trademarks

It is principally illegitimate to assume an indefinite lifetime of a brand or trademark without conducting further analysis.¹³ Like IAS 38, IDW S 5 suggests deriving the definite useful life of a brand from product life cycles. Furthermore, past experience and extensive market analyses can indicate which lifespan to assume when discounting expected future free cash flows.¹⁴

MARKABLES,¹⁵ a venture of brand valuation experts, analysed the useful life assumed in the valuations of 4,500

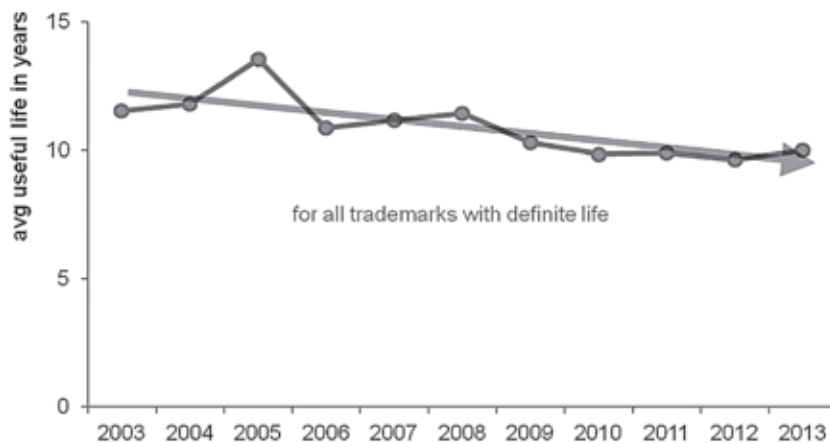
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 8. C. Binder & S. Rüssli, *The useful life of trademarks*, World Trademark Review Dec. 2014/Jan. 2015 (2014).
 9. IAS 38 – *Intangible Assets*, Primary Sources IBFD [hereinafter IAS 38], also available at <https://www.iasplus.com/en/standards/ias/ias38> (accessed 31 Jan. 2022).
 10. Para. 88 IAS 38.
 11. See para. 91 IAS 38.
 12. Para. 90 IAS 38.
 13. See Recital 71 IDW S 5 – The Institute of Chartered Accountants in Germany Valuation Standard for Intangible Property (IDW Standard *Grundsätze zur Bewertung immaterieller Vermögenswerte* (IDW S 5), 25 May 2010) [hereinafter IDW S 5].
 14. See Recital 72 IDW S 5.
 15. MARKABLES, *The Useful Life of Trademarks* (17 July 2014), available at <https://www.markables.net/the-useful-life-of-trademarks/> (accessed 31 Jan. 2022).

Figure 1 – Useful life of trademarks



Source: MARKABLES, *The Useful Life of Trademarks* (17 July 2014), available at <https://www.markables.net/the-useful-life-of-trademarks/> (accessed 31 Jan. 2022).

Figure 2 – Useful life of definite-lived trademarks



Source: MARKABLES, *The Useful Life of Trademarks* (17 July 2014), available at <https://www.markables.net/the-useful-life-of-trademarks/> (accessed 31 Jan. 2022).

trademarks and brands from 2003 to 2013. The analysis showed that for 50% of all valuations no limit was foreseeable. For the other 50% of appraisals, the average determined definite useful lifetime was 10.7 years. The results of determined definite lifetimes extend from six months to 50 years.

The research also reveals that in 55% of the cases a useful life of 5, 12, 15 or 20 years was assumed. This emphasizes the difficulty and uncertainty related to determining the foreseeable life of a brand or intangible asset in general.¹⁶

Additionally, MARKABLES¹⁷ analysed how these numbers developed in the observed period (see Figure 1).

In Figure 1, the development of the share between the assumption of indefinite and definite life is illustrated. In 2003, definite life assumptions accounted for roughly 20%. By 2013, the number tripled to 60%. Simultaneously, the average value of definite lives assumed fell from 12.5

years to approximately ten years in 2013. The downside trend is depicted in Figure 2.¹⁸

Overall, it can be concluded that there is a major shift towards definite and shorter expected lives for brands. Besides, the useful life in high tech and industries driven by high innovation efforts is shorter than in the consumer goods industry or in mature markets.¹⁹

There are major reasons that may explain this shift. One is that the methodology of determining the future cash flows has improved. Also, thanks to the Internet, it has become much easier to compare and find data samples. Another reason might be that the required yearly impairment test for indefinite appraised assets may be more expensive than the amortization of the assets.²⁰

In general, an aggregated overview of useful lifetimes can be considered as a starting point for an analysis, but the deviation in different industry branches can be very significant. While the research examined above identified

16. Binder & Rüssli, *supra* n. 8.

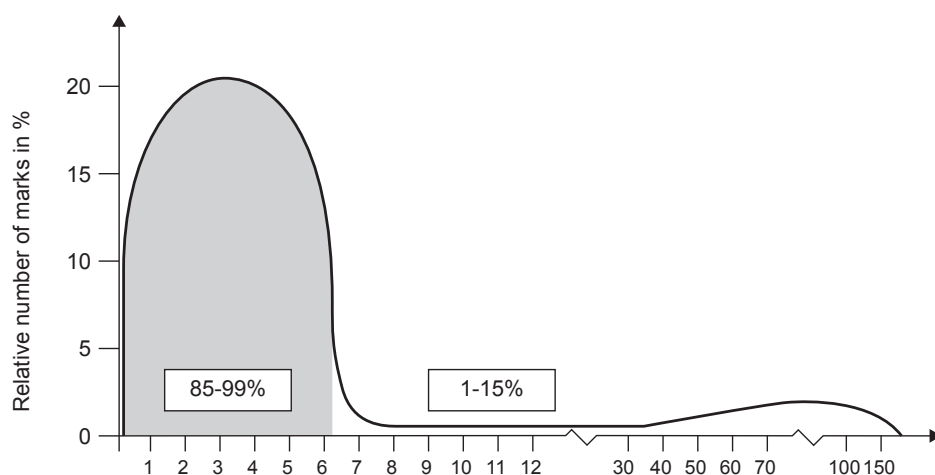
17. MARKABLES, *supra* n. 15.

18. Binder & Rüssli, *supra* n. 8.

19. MARKABLES, *supra* n. 15.

20. Binder & Rüssli, *supra* n. 8.

Figure 3 – Distribution function of the useful life of brands



Source: H. Meffert, C. Burmann & M. Koers, *Markenmanagement – Grundlagen der identitätsorientierten Markenführung* (1st ed., Gabler 2002).

the useful life of brands for accounting purposes, marketing research also suggests considering product life cycles as an important factor in determining the useful life of a brand. The product life cycle helps to emphasize the definite life of intangibles and especially of brands, because they are usually tied to related products.²¹

Research conducted in the past has shown that the average life cycle of industrial goods in the 1970s fell from 11 to an average of six years in 1993.²²

Meffert, Burmann and Koers²³ analysed further research on the life of industrial goods, including a study by the Fraunhofer Institute, which ascertained that the average lifetime for industrial goods in the electronic and computer industry branch was four years. In most cases, the average was between four and six years.

The product life of consumer goods is typically shorter than that of industrial goods. Due regard must be given to the fact that the presented average lifetimes are related to product life and not to the life of a brand. Their useful lives may be identical to a large extent; nevertheless, it can be taken as agreed that the useful life of brands is generally longer than that of products.²⁴ Figure 3 shows the distribution function of the useful life of brands. The x-axis expresses the lifetime of brands in years, while the y-axis shows the relative number of the brands in percentages.

The function shows a rough distribution of a brand's lifetime because it does not consider different industries, markets and countries. Regardless of the shallowness of this figure, it shows very well that the average lifetime of a brand is indeed very short. Accordingly, most brands do not exist for more than five years. Of course, there are always exceptions, as the upswing in the distribution

indicates. Some brands can become very old (e.g. Coca-Cola, Ford). Nevertheless, the status of a "strong brand" still does not legitimate the assumption of an indefinite useful life of brands. For instance, the US Tax Court only supposed a useful life of 20 years for Amazon, which is considered one of the world's most valuable brands.²⁵

2.2. Customer-related intangibles

Naturally, it is the intention of every manager to maintain customer-related intangibles permanently. Nevertheless, the assumption of an indefinite lifetime of customer-related intangibles (e.g. customer lists, a customer base) is not appropriate because the number of customers is empirically proven to be subject to fluctuation. This means that existing customers quit the relationship or cannot be retained and new customers are acquired.²⁶

IDW S 5²⁷ provides the following factors that can be considered in determining the useful life of customer-related intangible assets:

- contract terms and expected renewals;
- legal, regulatory, economic and technological aspects;
- product life cycles;
- stability in the branch of industry;
- prospective actions of competitors;
- amount of expenses necessary to retain customers and extend contracts, respectively;
- dependence on customers; and
- demographic/biometric aspects with respect to the established customer structure.

These factors are very similar to those provided by the international standard (see chapter 5 of the IAS 38).²⁸ Furthermore, historical data of customer portfolios can be used to statistically analyse the useful lifetime of e.g. customer lists. The insights gained lead to a decline rate,

21. H. Meffert, C. Burmann & M. Koers, *Markenmanagement – Grundlagen der identitätsorientierten Markenführung* (1st ed., Gabler 2002).

22. W. Droege, K. Backhaus & R. Weiber, *Strategien für Investitionsgütermärkte: Antworten auf neue Herausforderungen* (Verlag Moderne Industrie 1993).

23. Meffert, Burmann & Koers, *supra* n. 21.

24. Id.

25. S.-E. Bärsch & C. Erb, *Bestimmung fremdüblicher Verrechnungspreise bei der Übertragung von Marken*, 56 Deutsches Steuerrecht 12 (2018).

26. See Recital 99 IDW S 5.

27. Id.

28. And here especially para. 90 IAS 38.

which can be used for the valuation of the relevant cash flow attributed to the customer-related intangible. The expense required for a renewal is to be tested by considering contracts and agreements with customers. The cost for the valuation of customer relationships should be considered. It can be the case that a useful life beyond the contract term is not economically efficient, because the valuation costs exceed the value.²⁹

For determining the useful life of customer-related intangibles, a product life cycle analysis is a good starting point because in many cases customers can only be retained if the products or services withstand competition or industrial changes. As outlined in section 2.1., the product life cycle is primarily dependent on the industry in which the company operates. We found out that product life cycles for industrial goods are typically longer than for consumer goods.³⁰ This might be due to higher technology efforts, which prevents competitors from entering the market and thus extends the product life cycle due to lower competition. The implications of product life cycles on the functional analysis of intellectual property will be discussed in section 3.

2.3. Patented technology

As mentioned in the introduction to section 2., patents are a form of intellectual property. In detail, a patent is an exclusive right granted by a sovereign state that guarantees an inventor or a company the protection and sole use of an invention for a limited period of time.³¹ Technology-based intangible assets (patented and unpatented) refer to innovation and technological progress.³² This section will look at useful life in the context of the valuation of patented technologies for taxation purposes.

For the calculation of the valuation, the expected useful life of the intangible has to be assumed. With regard to the derivation of the economic lifetime of the relevant patent, both technological and legal aspects have to be taken into consideration. Depending on the type of patented technology, the respective life cycles of the technologies have to be analysed.³³ From a legal point of view, according to section 16 paragraph 1 of the German Patent Law (*Patentgesetz*, PatG), the maximum useful life for a patent is 20 years from the filing date. Also, the duration of a patent protected by the European Union is 20 years on condition of the payment of the annually incurred fees.

However, the determination of the “correct” useful life for tax valuation purposes in practice appears to be controversial and worthy of discussion with regard to the legal protection period of 20 years. Empirical evidence for this

is provided in two articles by Pakes and Schankerman,^{34,35} which show that usually only a small percentage of all patents are actually maintained over their full term. A similar argument is made by Rings,³⁶ who also deals with the difference between economic and legal useful life, stating that patents are often not maintained over their entire legal useful life because the expected benefit from the patent would no longer justify the costs of continuation. Moreover, as a result of new developments or changes in the demand situation that can lead to a deterioration in the exploitation prospects, a much shorter-term economic devaluation can be assumed.³⁷ Overall, these assumptions support the finding that there are only a few patents that patentees maintain beyond the maximum term of protection; especially since both exogenous and endogenous influences must necessarily be taken into account when evaluating the remaining useful life.³⁸

The economic life represents a subset of the maximum patent term of 20 years during which the patent can be used economically. As mentioned above, empirical studies conclusively show that only a small number of patents are actually maintained over their entire term.³⁹ This can most likely be attributed to the fact that the marginal utility from maintaining a patent steadily decreases over time.⁴⁰ Thus, the estimation of the remaining economic life at the time of valuation represents a central point of patent valuation.⁴¹ However, a useful life of 20 years does not appear to be appropriate.

For such cases, when considering the time horizon, it might be helpful to apply a simplification rule instead. Such a rule could be derived from the average patent utilization. Empirical studies have shown that European patents have an average term of 12 years, which in turn is identical to their useful life.⁴² However, Baudry and Dumont⁴³ conclude that only 25% of French patents are maintained over a period of 13 years, while 50% of French patents are abandoned within 8 years. In con-

29. See Recital 101-102, IDW S 1 – The Institute of Chartered Accountants in Germany Valuation Standard for Companies (IDW Standard Grundsätze zur Durchführung von Unternehmensbewertungen (IDW S 1), 2 Apr. 2008).

30. Binder & Rüssli, *supra* n. 8.

31. WIPO, *WIPO Intellectual Property Handbook: Policy, Law and Use* (WIPO Publication 2008), available at https://www.wipo.int/edocs/pubdocs/en/intproperty/489/wipo_pub_489.pdf (accessed 31 Jan. 2022).

32. See Recital 13 IDW S 5.

33. See Recital 133 IDW S 5.

34. A. Pakes & M. Schankerman, *The Rate of Obsolescence of Patents, Research Gestation Lags, and the Private Rate of Return to Research Resources, in R & D, Patents, and Productivity* (Z. Griliches ed., University of Chicago Press 1984), available at <http://www.nber.org/chapters/c10045> (accessed 31 Jan. 2022).

35. M. Schankerman & A. Pakes, *Estimates of the Value of Patent Rights in European Countries during the Post-1950 Period*, NBER Working Paper Series, Working Paper No. 1650 (1985).

36. R. Rings, *Valuation of Patents: Methods for Evaluating IP Assets in View of Legal, Technical and Business Related Factors*, Patent World (May 2002).

37. M. Karrenbauer, *Kommentierung des § 255 HGB, Bd. Ia*, in *Handbuch der Rechnungslegung – Kommentar zur Bilanzierung und Prüfung* (K. Küting & C.-P. Weber eds., 1995).

38. H. C. Spranger, *Die Bewertung von Patenten* (2006).

39. Pakes & Schankerman, *supra* n. 34; Schankerman & Pakes, *supra* n. 35.

40. Schankerman & Pakes, *supra* n. 35.

41. R. Rings, *Patentbewertung – Methoden und Faktoren zur Wertermittlung technischer Schutzrechte*, 102 Gewerblicher Rechtsschutz und Urheberrecht 10 (2000).

42. H. Goddar, *Die wirtschaftliche Bewertung gewerblicher Schutzrechte beim Erwerb technologieorientierter Unternehmen*, Mitteilungen der deutschen Patentanwälte 12 (1995).

43. M. Baudry & B. Dumont, *Patent renewals as options: Improving the mechanism for weeding out lousy patents*, 28 Rev. Ind. Organ. 1 (Springer 2006).

trast, Hikkerova, Kammoun and Lantz⁴⁴ conclude that 50% of European patents are abandoned in the 13th year of life and only 25% continue beyond the age of 17. Unlike Baudry and Dumont,⁴⁵ only 11% of patents were abandoned within eight years. Overall, this definitely approximates the assumptions that an average term of, say, 12 years, based on the European median, would indeed lead to more appropriate results for tax valuation purposes than a fixed assumption of 20 years.

3. Implications on the Taxation of the Transfer of Intellectual Property in a Business Restructuring Transaction

The previous section analysed the economic life of intellectual property. By definition, intangible assets are an essential part of the transfer package of a business restructuring transaction (cf. section 1 paragraph 3 sentence 9 of the Foreign Tax Code (*Außensteuergesetz*, AStG)).

The studies analysed revealed that, principally, a definite time frame of capitalization is to be alleged for the valuation of intellectual property for tax purposes. Rüssli and Binder⁴⁶ show that the useful life of a trademark has shrunk in the last decade and that the decline will continue. Meffert, Burmann and Koers⁴⁷ show in a distribution curve that 85-99% of all brands do not exceed a useful life of six years. This can serve as a point of orientation for determining the lifespan of brands in a business restructuring transaction. Furthermore, it is suggested to refer to product life cycles when determining the economic life of intangibles. They can be considered for the valuation of brands and trademarks as well as for customer-related intangibles like a customer base (see section 2.2.). The lifespan of a product is primarily dependent on the industry branch. Different industries are affected by different factors such as competition, technology and structural changes and commodity prices. The insights gained on the different product life cycles of different industries can be used to analyse intellectual property for tax purposes. It can be taken as a rule of thumb that consumer goods usually have a shorter life cycle. Competition is a factor that challenges companies and usually shortens the life cycle of products because newer and better products have to be introduced in order to hold off pressure from competitors. Especially in the fast-moving consumer goods sector the competitive environment is very dynamic, so product life cycles are shorter. Industrial goods, especially those that require a high amount of technical work and know-how, typically have a longer product life cycle of between four and six years. In such specialized and technical industries, the market entry cost for competitors is typically very high, which means that there is a less competitive environment than in the consumer goods industry. MARKABLES⁴⁸ argues differently: they say that the economic life of a brand is shorter in high-tech or inno-

vation-driven industries because new technologies are invented and improved at an enormous pace, which shortens product life cycles. The fact that there are different perspectives on the influence of technological changes on the lifespan of a product stresses the need to assess the time frame of capitalization for each transfer package individually. The distribution curve of Meffert, Burmann and Koers⁴⁹ shows that there are exceptions, and some brands become very old. An example of this is companies in oligopolies such as Ford in the automotive industry.

To sum it up, we can assume that the economic life of products and therefore of the intellectual property of the transferred function is limited. An individual in-depth industry analysis is indispensable to gathering important information for determining an appropriate time frame of capitalization in dealing at arm's length.

4. Conclusion

The research findings of this series of articles shows that the assumption of an indefinite time frame of capitalization for business restructurings does not lead to a transfer price that complies with the arm's length principle. The lifespan of companies was considered from different angles. The results show that most companies do not reach an age that would justify the application of a perpetuity in the valuation process. Furthermore, evidence was provided that the probability of default cumulates, which has a substantial influence on the terminal value of the transferred function. This approach shows that overvaluation in business restructurings is ubiquitous. Consequently, the risk of double taxation for MNEs is very high due to a lack of national legislation on the tax treatment of business restructurings. The detailed legislation and guidance in Germany is an exceptional case. The missing obligation of agreement on double taxation proceedings between tax jurisdictions in the BEPS Action Plan also increases the risk of double taxation.

To minimize overvaluations of business restructurings and the accompanying risk of double taxation, section 6 of the FVerlV and the Administration Principles⁵⁰ should be amended. The evidence provided in this article shows that the status quo of the valuation standard is not dealing at arm's length. Consideration should be given that a definite time frame of capitalization is to be assumed and evidence must be provided by the taxpayer for an indefinite capitalization of expected future cash flows. Furthermore, it should be deemed a standard to individually assess the time frame of capitalization for each transfer package. The functional analysis for each transfer package should assess whether an indefinite or a definite time frame of capitalization should be applied.

44. L. Hikkerova, L. Kammoun & J.-S. Lantz, *Patent life cycle: New evidence*, 88 *Technological Forecasting & Social Issue C* (2014).

45. Baudry & Dumont, *supra* n. 43.

46. Binder & Rüssli, *supra* n. 8.

47. Meffert, Burmann & Koers, *supra* n. 21.

48. MARKABLES, *supra* n. 15.

49. Meffert, Burmann & Koers, *supra* n. 21.

50. DE: Grundsätze für die Prüfung der Einkunftsabgrenzung zwischen nahe stehenden Personen in Fällen von grenzüberschreitenden Funktionsverlagerungen (Verwaltungsgrundsätze Funktionsverlagerung) [German Administrative Principles – Business Restructurings], 13 Oct. 2010, BMF IV B 5 – S 1341/08/10003.