Section 1: Context, Coverage and Focus

Important Note: This paper was issued shortly before the OECD’s release of the final BEPS recommendations in October 2015. While the author believes that fundamentally little needs to be changed as a result of the final OECD recommendations, this paper has not been updated for those.

1.1 Background

The Singapore Tax Academy-Singapore Management University (“TA-SMU”) Centre of Excellence has commissioned this research paper to address a number of the key taxation issues surrounding intangibles. Many Western jurisdictions have grappled with these matters for some time (somewhat unsuccessfully in the author’s view in terms of consistency of approach) and the same issues are also of great importance to Asian countries as they evolve and seek ways to encourage innovation and creativity. Singapore to its credit has recognised the trend and has established IPOS\(^1\). IPOS is a Statutory Board under the Ministry of Law and its mission is to “provide infrastructure, build expertise and grow an ecosystem in support of the creation, protection and exploitation of Intellectual Property”\(^2\). Its vision is for Singapore to be an Intellectual Property (“IP”) Hub for Asia.

In order to achieve this vision, Singapore, like other Asian countries and indeed Western countries, will need to address not only its own tax position on the matters addressed in this research but also needs to consider positions taken on the same issues by its trading partners and indeed how to react to those positions. Of course, taxation issues are only one aspect; adequate protection of MNEs’ valuable intangibles under the laws of the relevant state and procedures and remedies for dealing with infringements are also relevant to a country’s competitive position.

The taxation and transfer pricing of intangibles is a complex subject and accordingly the author is very grateful for the help and input received from a number of individuals on various sections of the paper and related Appendices. Many of the contributors are ex colleagues of the author from PwC offices around the world (proving the point that the network is alive and flourishing!). Thanks are due in particular to the following individuals:

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\(^1\) IPOS-Intellectual Property Office of Singapore-www.ipos.gov.sg
\(^2\) www.ipos.gov.sg
Daryl Tan Junyang – Student at Singapore Management University, School of Accountancy. Daryl contributed significantly to Sections 2.1, Section 3.2.10 and Appendix 1.

Vivienne Ong and Aloysius Lim – PwC Singapore for their help in coordinating country responses on the Matrices at Appendices 3 and 4 and for their valuable input on Section 5 of this paper.

Falgun Thakkar – PwC Singapore on secondment to PwC London, for his important contributions to Sections 2.3 and 4.2.

A number of PwC participants from around the world helped to provide the country responses that were summarised and incorporated into the data provided in Appendices 3 and 4. The author extends his thanks to each and every one of them for taking time out of their busy schedules to answer my questions and related harassment! The names and countries of these individuals are listed below.

PwC Asian Country Respondents:

Singapore:  Paul Lau, Vivienne Ong
China:       Spencer Chong, Deborah Li
Hong Kong:   Colin Farrell
Indonesia:   Ay Tjhung Phan; Amit Sharma
India:       Ruhi Mehta; Saurav Bhattacharya
Japan:       Ryann Thomas
Malaysia:    Jagdev Singh
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PwC Western Country Correspondents:

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Luxembourg:  Valery Civilio; Pawel Wroblewski
Netherlands: Erik Berk
Switzerland: Maire Walsh; Michael Straits
UK:          Andrew Casley
USA:         Natalie Hodapp; Christine Turgeon

Again, a very sincere thanks to all contributors. As an author’s note, I would add that I alone am responsible for the edited versions of the contributors’ content that appears in this paper and my apologies to the contributors if my efforts to summarise the input has inadvertently caused some inaccuracies. I hope these are at a minimum.
The remainder of this paper will address various aspects relating to intangibles as follows:

1.2 The Importance of Intangibles

Discussions regarding Intangibles seem to be appearing everywhere these days in the Financial Press (e.g. The Economist), in taxation forums and in the OECD’s discussion drafts and reports issued under the Base Erosion and Profit Shifting (“BEPS”) initiative.

One might well ask why this apparent obsession exists. After all, aren’t intangibles invisible? The answer becomes pretty clear by simply referencing Ocean Tomo’s 2015 update to its Annual Study of Intangible Asset Market Value. The data reflected in the chart below reveals that the intangible asset value of the S&P 500 grew to an average of 84% by January 1st, 2015, a staggeringly high proportion of the total value. Brands, tradenames, patents, copyrights all contribute to that but so do the unregistered intangibles including those such as know-how, customer lists and distribution networks.

![Components of S&P 500 Market Value](image)

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3 OECD is the Organisation for Economic Cooperation and Development (www.OECD.org)

4 Ocean Tomo, “Annual Study of Intangible Asset Market Value”

Even in the area of technology, new developments are moving ahead at a tremendous rate. Think of the strides forward (and debates) on AI (Artificial Intelligence). A look at the front cover of the Economist on 25th July, 2015 heralding the “Empire of the Geeks“ as the lead article which discussed the success of Silicon Valley’s innovators and their disruptive creativity, should send a clear message. It is obvious that intangibles are therefore extremely important to corporate performance and as a consequence, individual economies and the global economy. It follows therefore that tax authorities are also extremely interested in capturing their fair share of such large value drivers whenever they have some nexus with their particular jurisdiction. Similarly, corporates will naturally be driven to protect shareholder wealth by sheltering such assets whenever possible in a jurisdiction that offers solid legal protection for the rights and facilitates their continuing development and with minimal imposts, duties or taxes dissipating their value.

Of course, the fact that intangibles do not have physical situs leads to the very issues raised between taxpayers and revenue authorities that we seek to explore in this paper. Just as CEOs in the business context must seek to capture, acquire and better manage valuable intangibles, so they must be managed and exploited efficiently but fairly from a taxation standpoint. Tax authorities clearly have justifiable concerns because many intangibles can easily be moved, legally or economically, beyond the borders of their jurisdictions, particularly to lower tax jurisdictions.

Thus in the last few years we have seen these concerns elevated through the UK Public Accounts Committee hearings on Starbucks and Google, the recent Senate inquiry hearings in Australia reviewing Apple and Google, BHP, Rio Tinto and most recently, the pharmaceutical companies such as Pfizer, Novartis and Astra Zeneca. We have also seen significant attempts to expand the definition of intangibles in the USA tax code and somewhat draconian changes in the USA cost sharing rules. In Asia, many Multinational Enterprises (“MNEs”) have experienced the aggressive side of the Indian tax authorities and recently, we have witnessed the Chinese State Administration of Taxation (“SAT”) issue Bulletin 16 which targets royalties and other fees paid to overseas related parties where those parties lack substance and have not contributed to value creation. And of course, we have the OECD’s BEPS initiatives.

**Section 2: Understanding Intangibles and BEPS**

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5 Note in late August 2015, the Senate Inquiry issued its first interim report with 17 recommendations with the final reporting date of 30 November 2015

6 On March 18, 2015, the State Administration of Taxation (SAT) released the Public Notice Regarding Certain Corporate Income Tax Matters on Outbound Payments to Overseas Related Parties (SAT Public Notice [2015] No.16, hereinafter referred to as the “Bulletin 16”).
2.1 Defining Intangibles, Legal Protection and Competitive Positioning

2.2 Intangibles versus Services

2.3 Network Impacts and Severability of Intangibles

2.4 Contractual Terms, Risks and Functions

Section 3: Valuation Methodologies

Section 4: Transfer Pricing Methodologies and use of Databases

Section 5: Evaluation of common tax issues in both Asian Countries and Western Jurisdictions

Section 6: Brief Consideration of Patent Box Regimes

Section 2- Understanding Intangibles and BEPS

The area of Intangibles has been a major focus of the OECD in recent years and has attracted a great deal of controversy and debate. It is no surprise then to see it as one of the major focus areas of the BEPS project. A number of the discussion drafts are of direct relevance to intangibles and these are summarised in the table below. One may note the last item under Action 13 regarding Country-by-Country Reporting (CbCR). Remember CbCR reporting will require details including revenue, profit, tax, number of employees and tangible assets. While it does not explicitly cover reporting of intangibles the reports will highlight payments to low tax jurisdictions with minimal tangible presence.
<table>
<thead>
<tr>
<th>BEPS ACTION #</th>
<th>Date Issued</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Action 8</td>
<td>16/9/14</td>
<td>Guidance on TP Aspects of Intangibles</td>
</tr>
<tr>
<td>Action 10</td>
<td>16/12/14</td>
<td>Use of Profit Splits for Global Value Chains</td>
</tr>
<tr>
<td>Actions 8-10</td>
<td>19/12/14</td>
<td>Draft re Risk, Recharacterisation and Special Measures</td>
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<td>Action 8</td>
<td>29/4/15</td>
<td>Revisions to TP Guidelines on Cost Contribution Arrangements (CCAs)</td>
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<tr>
<td>Action 8</td>
<td>4/6/15</td>
<td>Hard-to-Value Intangibles</td>
</tr>
<tr>
<td>Action 13</td>
<td>29/4/15</td>
<td>CbCR Implementation Package</td>
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This paper will address the aspects discussed in each of these papers and will also seek to draw on some practical experiences to help illustrate some of the aspects.

2.1 Defining Intangibles, Legal Protection and Competitive Positioning

2.1.1. Legal Protection and Competitive Positioning

In the Singapore IPOS website IP management is described as “ascertaining the company's intangible assets, designing management processes to safeguard them, and utilising the IP assets to help determine the competitive edge and formulate the growth

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7 www.ipos.gov.sg
strategy for the company”. This is a fine description of the type of functions one would expect to see in the post BEPS era. Functions are examined later in this paper but the IPOS commentary also infers that environments that help to facilitate the safeguarding and utilization of valuable intangible assets are highly regarded and sought after. Most intellectual property owning corporates and individuals want to ensure that their valuable intangible assets will be protected and that there are effective enforcement procedures and remedies against those who infringe or exploit rights without license or permission. All of these factors come into play as intellectual property owners seek safe and secure locations to house their assets. Countries like Singapore, who seek to provide such a secure environment, compete to attract such value added activities. There are a number of countries along with Singapore which offer a the most secure environments for IP such as Finland, Switzerland, United Kingdom, Hong Kong, Netherlands and Ireland. In the World Economic Forum’s (“WEF”) Global Competitiveness Report 2014/2015, Singapore is actually ranked second in the world just behind Finland in offering the best IP protection. In the USA Global Intellectual Property Center’s International IP Index 2015 Singapore comes in fifth but certainly first in Asia.

On the flip side, many will have heard tales of brand and technology infringements in Asia, in China, India, Indonesia and Thailand as examples. The aforesaid WEF report would appear to bear this out, ranking China 53rd, India 65th and Thailand 104th. This is an issue for Asia as countries in the region seek access to technology and attract big name brands. A fuller discussion on the rankings and non-tax issues are summarized at Appendix 1.

2.1.2. Defining Intangibles (and Intellectual Property)

Essentially, an intangible asset is a non-physical claim to future benefits. These assets can be generated through organizational designs, graphic designs and know-how or through innovation and human effort. When intangible asset are legally protected such as patents, trademarks or copyrights they are usually referred to as “intellectual property (“IP”).

However there are specific definitions of IP and other intangibles in the tax laws of many countries that differ in scope and coverage. In addition there are the OECD guidelines offering definitions that can hopefully be generally agreed upon and applied consistently across the globe. In the following paragraphs we will look firstly at the OECD definition and then contrast that with some of the key country definitions.

2.1.2.1 2010 OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations

Chapter VI of the 2010 OECD Transfer Pricing Guidelines begins by generally defining intangibles as including “rights to use industrial assets such as patents, trademarks, trade names, designs or models.” It also included “literary and artistic property rights and
intellectual property such as know–how and trade secrets” The chapter then concentrates on commercial intangibles, defined as intangibles that include patents, know-how, designs and models that are used in commercial activities such as the production of a good or the provision of a service, as well as intangible rights that are business assets transferred to customers or used in the operation of business. Other forms of commercial intangibles are marketing intangibles which include trademarks and trade names, customer lists, distribution outlets and such like promotional items.

In the 2010 guidelines, trade intangibles are referred to as intangibles other than marketing intangibles, created through risky and costly research and development (R&D) activities, which the developer generally tries to recover and obtain a return thereon through product sales, service contracts, or licence agreements.

2.1.2.2 OECD Guidance on Transfer Pricing Aspects of Intangibles—BEPS Action 8 2014 Deliverable

These new draft guidelines issued in September 2014 contain revisions to Chapters I, II and VI of the 2010 guidelines and include clarifications on the definition and identification of intangibles as well as supplemental guidance on pricing. At the time of writing, these have yet to be finalized but will eventually replace the intangible-related provisions in the 2010 guidelines.

The new guideline recognizes the difficulties associated with definitions of intangibles that are either too narrow or too broad. Specifically, an overly narrow definition may result in positions taken where taxpayers or governments preclude items as intangibles and argue that transfers of the same can be made without adequate compensation and yet, an overly broad definition may judge items to be intangible when they are not. This confuses the position and could result in transfers of IP at less than or more than values or compensation that would likely apply between independent parties.

Consequently, the new guidelines define an “intangible” as something which is not a physical asset or a financial asset, which is capable of being owned or controlled for use in commercial activities, and whose use or transfer would be compensated had it occurred in a transaction between independent parties in comparable circumstances.

Obviously the OECD’s focus has now shifted from a more detailed definition to a more principled-based approach specifically involving the determination of conditions and pricing that would be agreed upon between independent parties for a comparable transaction.

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8 2010 OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations Chapter VI.

9 OECD Guidance on Transfer Pricing Aspects of Intangibles—BEPS Action 8 2014 Deliverable
The new guidelines clarify that though the characterization of an item as an intangible for accounting or legal purposes may indicate the presence of an intangible, these characterizations are not necessary or definitive conditions for tax purposes. The revised guidelines also clarify that market conditions and group synergies, by definition, are not capable of being owned or controlled and hence cannot be considered an intangible.\(^\text{10}\)

The previous categorization of marketing intangibles and trade intangibles is retained to facilitate discussion.\(^\text{11}\) However, this does not remove the need to assess the conditions that would be agreed upon between independent parties for a comparable transaction.

The new OECD guidance also maintains the category of “unique and valuable” intangibles. These refer to intangibles:

(i) That are not comparable to intangibles used by or available to parties to potentially comparable transactions, and

(ii) Whose use in business operations (e.g. manufacturing, provision of services, marketing, sales or administration) is expected to yield greater future economic benefits than would be expected in the absence of the intangible.

For this category of intangibles the guidance emphasises the need carefully assess comparability and/or the need to perform comparability adjustments. Where there is a clear lack of meaningful comparability other methods such as transactional profit split or other income based methods need to be addressed.

\subsection*{2.1.2.3 Identification and Framework for Analysis}

The 2014 Guidance in Action 8 deliverable sets out some general aspects and a useful framework to identify and analyse intangibles.

For example at paragraph 6.4 it states that in order to determine arm’s length conditions, it is important to consider (i) the identification of specific intangibles; (ii) the legal ownership of intangibles; (iii) the contributions of MNE (multinational enterprises) to their development, enhancement, maintenance, protection and exploitation (“DEMPE functions); and (iv) the nature of the controlled transactions including their contribution to value creation.\(^\text{12}\)

\begin{flushleft}
\text{\footnotesize \textsuperscript{10} Ibid} \\
\text{\footnotesize \textsuperscript{11} Ibid-paragraph 6.16} \\
\text{\footnotesize \textsuperscript{12} OECD Guidance on Transfer Pricing Aspects of Intangibles-BEPS Action 8 2014 Deliverable-paragraph 6.4}\end{flushleft}
Later in the Guidance\textsuperscript{13} a framework for analysing transactions involving intangibles is set forth and can be summarised as follows:

(i) Identify the legal owner of the intangibles based on legal, agreements, contracts and other indicia of ownership;
(ii) Identify the parties performing the important functions (as in 6.4 –see above), using assets and assuming risks;
(iii) Confirm that the parties’ conduct is consistent with the legal agreements;
(iv) Identify the relevant transactions and the conduct of the parties involved and their contribution to the creation of value;
(v) Determine the arm’s length price for the transactions consistent with each party’s contributions

The foregoing paragraphs are useful as a disciplined process with which to approach the analysis. The first point is clear and that is to identify the intangibles involved. This is not always an easy task or an obvious one. There are the more obvious examples of intellectual property items such as patents, copyrights, trademarks and those created by contract and then there are others like know-how and trade secrets. These are all quite well defined and understood but consider others such as those which are neither protected nor registered such as certain marketing intangibles, relationships, customer information, goodwill, network effects and barriers to entry. Should the latter be considered as separate intangibles capable of being transferred? Some perhaps can be, such as customer lists, but even then, placing a separate value on them is a difficult task. Others are more difficult to define and even more difficult to value. For example, how does one price network effects (discussed further at 2.3.2.). Some of the latter items mentioned above are so intertwined with the business as a going concern that they serve to enhance the value of specific intangibles rather than serving as transferable intangibles themselves. If so, does that mean that some of the specific intangibles don’t really have significant value without these enhancers? These are difficult issues that have exercised the minds of taxpayers and revenue authorities alike over the years.

The author has also had experience in a case where the intellectual property involved was a patent but in fact the patent was but a small nucleus within an entire technological ecosystem most of which was not patented and perhaps not particularly unique in terms of the constituent elements but where the integrated value of all the elements far exceeded the sum of the parts.

The broad definition of intangibles now adopted by the OECD would appear to make sense in today’s world. For example, many enterprises do not even seek patent

\textsuperscript{13} OECD \textit{Guidance on Transfer Pricing Aspects of Intangibles-Action 8 2014 Deliverable}-paragraph 6.34
registrations these days for their innovations for fear of competitors gaining knowledge. That does not make these innovations less important or valuable, nor does it make them inferior in some way. In fact there have been criticisms of the patent system including views that the patent system is actually discouraging innovation!\textsuperscript{14} It remains to be seen whether changes will be made in due course but for tax purposes perhaps the various favourable tax deductions and tax regimes globally restricting benefits to patents will need to be reconsidered.

Perhaps another question from a transfer pricing ("TP") perspective, is whether it is really necessary now to differentiate specific intangibles from the more generic intangibles inseparable from the business itself? With the BEPS agenda, are we not moving down a path where profits are allocated or split to where value is created based on people functions, assets and risk management functions. For example, the guidelines in the draft Action 8 plan make it very clear that bare legal ownership of intangibles will not be entitled to any portion of the return derived by a group from the exploitation of the intangibles, save perhaps some minimal compensation perhaps for holding title.\textsuperscript{15} The legal owner may of course fund the purchase or development of the intangible in which case might also be entitled to an arm’s length return for financing the intangible.

It should be emphasised that the process of identifying the intangibles and the important functions is very fact specific and needs careful evaluation. Even the relatively simple example in the draft guidelines is not so simple and for illustration is repeated here.

The example\textsuperscript{16} involves an intangible purchased by a member of a group from a third party. It is then exploited through manufacturing and distribution functions performed by other group members while being managed and controlled by the group member that purchased it. The assumptions in the example are that the intangible requires no development, requires little maintenance or protection and has little utility outside of its particular application. The key functions in this scenario are a) those necessary to select the intangible on the market; b) to analyse the potential benefits within the Group; c) the decision to purchase the intangible; and d) the funding to purchase the intangible. In this case the intangible owner within the group may well be entitled to all or most of the return from this intangible.

Despite the questions and comments above, in the author’s view it does remain important to identify the intangible being transferred. This may, for one, have a bearing on the approach one might take to value/price the intangible. For the common intellectual

\textsuperscript{14} See lead article the 8th August 2015 edition of The Economist –"Set innovation free ! 
\textsuperscript{15} OECD Guidance on Transfer Pricing Aspects of Intangibles-BEPS Action 8 2014 Deliverable-paragraph 6.42
\textsuperscript{16} OECD Guidance on Transfer Pricing Aspects of Intangibles-BEPS Action 8 2014 Deliverable-Paragraph 6.49
properties such as patents, trademarks and copyrights, there may well be some comparable uncontrolled transactions out there. For the intangibles (if indeed they are intangibles) that appear to be embedded within the business itself (e.g. goodwill, network effects and relationships) they may call for more of a profit split approach. Secondly, identifying the intangibles should facilitate an analysis of what is being transferred legally, what restrictions there might be (and the impact of that on value) and whether the transferred items are inextricably bundled or can be segregated and priced individually. The identification process is also helpful to identify what simply does not make sense commercially and the spectre of re-characterisation needs to be addressed.

Going back to the question of what may or may not constitute an intangible, there has often been debate over items such as an assembled workforce. The 2014 draft guidance note in addressing the amendments required to Chapters I–II of the 2010 Guidelines, appears quite clear that a workforce is not an intangible as such although it points out that a skilled workforce may well be valuable requiring adequate compensation in its own right which needs to be addressed in the transfer pricing analysis. The draft also notes that the transfer of one or more employees between related parties may result in a transfer of valuable know-how.

On the contrary, the USA Internal Revenue Service has consistently advanced the view that the “workforce in place” is an intangible for US Federal income tax purposes and transfer pricing purposes. This position was evidenced in a 2007 IRS Industry Directive. The rational was articulated by example back in September 2009 by Steven Musher, then the IRS Associate Chief Counsel (International). He talked about a license of software that had yet to be completed by a dedicated research team and in his view the transfer of software had to be valued with the team, because without the team the value would be much reduced. Yes the transferee entity could hire a new team but that takes time and money.

Most taxpayers and their advisors believe that the IRS’s position cannot be sustained under the present USA tax code or regulations. However the Obama administration continues to be concerned about the issue as it believes that leaving workforce outside of the intangible definition could result in the avoidance of US tax rules. Accordingly the administration has consistently proposed the same amendment to the Code for the last five budget cycles to “clarify” the position. That “clarification” would result in workforce, goodwill and going concern value being added to the USA extended definition of intangibles (see further at 2.1.2.4 below. However after five budget cycles it has not gone through yet.

2.1.2.4 Country Definitions
The paragraphs that follow briefly explore and compare definitions of intangibles across a number of countries (a far from exhaustive list). As will be noted these definitions range from the generic to the very prescriptive. It will be interesting to see how many countries adopt similar principles to the revised (and broad) OECD definition or continue to move forward with their own definitions. The latter scenario again raises familiar concerns about possible disputes and the potential for double taxation. The definitions below are generally only relevant for transfer pricing purposes. In a number of jurisdictions there are also provisions defining intangibles that may qualify for specific tax deductions e.g. patents etc.
UK

The UK HMRC’s International Manual 440110\(^{17}\) on Transfer Pricing states the following:

From a transfer pricing point of view, an intangible is any property that is not tangible but is nonetheless still clearly property that could be exploited. This exploitation would have a value between independents.

This definition of an intangible, while not particularly helpful, seems to be in line with the approach taken by the new proposed OECD guidelines. Specifically, the two main factors are the lack of physical form, and the reference to independent parties.

USA

The U.S. Inland Revenue Code, Section 482\(^{18}\) takes the opposite approach.

Section 482 of the Inland Revenue Code, which deals with transfer pricing, defines intangible property as an asset that comprises any of the following items and has substantial value independent of the services of any individual—

(1) Patents, inventions, formulae, processes, designs, patterns, or know-how;
(2) Copyrights and literary, musical, or artistic compositions;
(3) Trademarks, trade names or brand names;
(4) Franchises, licenses or contracts;
(5) Methods, programs, systems, procedures, campaigns, surveys, studies, forecasts, estimates, customer lists, or technical data; and
(6) Other similar items. For the purposes of section 482, an item is considered similar to those listed in (1) through (5) above if it derives its value not from its physical attributes but from its intellectual content or other intangible properties.


\(^{18}\) Inland Revenue Code Section 482. Retrieved from http://www.law.cornell.edu/cfr/text/26/1.482-4
The Inland Revenue Code systematically categorizes intangibles. However, one difference is that this definition involves a narrow aspect and a broad aspect. Items 1 to 5 above specifically list items qualifying as intangibles providing a narrow definition. On other hand 6 above provides a wider interpretation of what qualifies as an intangible. It would appear that this provides flexibility as well as ambiguity at the same time (perhaps as evidenced earlier in the discussion on the IRS’s view of workforce in place).

**India**

India has generally adopted a USA type model but with an even more extensive list of what will be viewed as an intangible. The Indian legislation, like the USA, also adds a “catch all” paragraph. The India Income Tax Act, Section 92B states the following:

S92B(2)(ii) the expression “intangible property” shall include—
(a) marketing related intangible assets, such as, trademarks, trade names, brand names, logos;
(b) technology related intangible assets, such as process patents, patent applications, technical documentation such as laboratory notebooks, technical know-how;
(c) artistic related intangible assets, such as, literary works and copyrights, musical compositions, copyrights, maps, engravings;
(d) data processing related intangible assets, such as, proprietary computer software, software copyrights, automated databases, and integrated circuit masks and masters;
(e) engineering related intangible assets, such as, industrial design, product patents, trade secrets, engineering drawing and schema-tics, blueprints, proprietary documentation;
(f) customer related intangible assets, such as, customer lists, customer contracts, customer relationship, open purchase orders;
(g) contract related intangible assets, such as favourable supplier contracts, licence agreements, franchise agreements, non-compete agreements;
(h) human capital related intangible assets, such as trained and organised work force, employment agreements, union contracts;
(i) location related intangible assets, such as leasehold interest, mineral exploitation rights, easements, air rights, water rights;

(j) goodwill related intangible assets, such as institutional goodwill, professional practice goodwill, personal goodwill of professional, celebrity goodwill, general business going concern value;
(k) methods, programmes, systems, procedures, campaigns, surveys, studies, forecasts, estimates, customer lists, or technical data;
(l) any other similar item that derives its value from its intellectual content rather than its physical attributes.]

It is interesting to note that the Indian definition referring to workforce and goodwill includes the very items that the IRS and taxpayers have been arguing about in the USA.

**Ireland**

In Ireland the Taxes Consolidation Act\(^{20}\) sets out the transfer pricing guidelines. However, the relevant part of that Act (Part 35A) does not provide a definition of intangible assets in the context of transfer pricing.

Although Part 35A\(^{21}\) does not provide any guidance on the definition or identification of intangibles, reference may be drawn from Section 291A of the Income Tax Act which begins by stating that an "intangible asset shall be construed in accordance with generally accepted accounting practice;" It then goes on to add a long prescriptive list of definitions for “specified intangible assets”

However caution should be exercised in looking at accounting practice because Ireland does follow OECD Transfer Pricing principles that clarify that the legal or accounting characterization of an item as an intangible is not a necessary condition for transfer pricing purposes.

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**Switzerland**

The Swiss Federal Tax Administration (FTA) and the Swiss tax legislation do not provide any definitions of intangible assets. The Swiss FTA has also not issued any specific transfer pricing guidelines to date.

However, Switzerland follows OECD Transfer Pricing Guidelines and as such, the Swiss view of intangible assets might be referenced from the OECD guidelines.

**Hong Kong**

The Hong Kong Inland Revenue Department's Departmental Interpretation and Practice Notes (DIPN) 46, provides guidance on transfer pricing issues. However, there is no further clarity or definition for intangibles provided in the guidelines.

Again DIPN 46\(^2\) generally adopts the principles in the OECD Transfer Pricing Guidelines.

**Singapore**

Finally and importantly for Singapore given its vision to become an IP hub for Asia, the transfer pricing guidelines published by IRAS \(^2\) also do not provide any definition of intangible assets.

Singapore generally adopts OECD Transfer Pricing Guidelines. In fact the Transfer Pricing Guidelines issued by IRAS cites paragraphs from those Guidelines. Those paragraphs involve key concepts, guiding principles, comparability analysis, and transfer pricing methodologies. Arguably, the definition of intangibles might also be referenced from the OECD guidelines.

However, Section 19B of the Singapore Income Tax Act, which provides for writing down allowances for intellectual property rights contains a definition of such rights i.e.

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“The right to do or authorise the doing of anything which would, but for that right, be an infringement of any patent, copyright, trademark, registered design, geographical indication, lay-out design of integrated circuit, trade secret or information that has commercial value ...”.

This definition provides some guidance for TP purposes but is clearly not as wide as the new OECD definition.

**Other Countries**

The other countries examined included China, Indonesia, Japan, Malaysia, Thailand, Germany, and Netherlands. Generally, these other countries do not provide a clear definition for the identification of intangibles. In addition, many of the Asian countries have major enforcement issues related to intellectual property rights infringement so to date there has been little interest on providing definitions of intangibles in the legislation for TP purposes.

**Conclusion**

With the possible exceptions of the UK, USA and India, most of the countries examined lacked a clear definition for the identification of intangibles for transfer pricing purposes. However, many of those countries have generally adopted the principles in the OECD guidelines and hence the intangibles definition might be inferred from there.

**2.2 Intangibles versus Services**

**2.2.1 Historical Approach**

Often, it is somehow assumed that all intangibles are more valuable than services especially corporate services rendered by a head office to group affiliates. Yes a number of corporate services are fairly routine especially back office activities but intangibles can also be routine. They are not always unique and very valuable.

Looking back as a tax advisor over the last 15-20 years, one might be forgiven for thinking that the OECD itself believed that corporate services should only command a low level of profit mark up in the absence of a comparable price in the market.

Yet now when one considers the impact and ingenuity of people like Li Ka-Shing in Hong Kong, Steve Jobs, Warren Buffet, Jack Welch, Richard Branson and many others like them who may be less well known but have contributed considerably to shareholder value of their organisations, a cost plus a small mark up charge to subsidiaries in their groups appears woefully inadequate for the strategic services
that they may have provided. Of course, one counter to this is that their activities may not produce benefits of any significance for the subsidiaries and may well be more like stewardship or shareholder type expenses which should not be charged out.

Another (perhaps more debateable) counter to this is that the remuneration (including stock options/incentives) paid to these individuals already adequately recognises the value they bring to the table and if that is charged out with a small mark up that is quite sufficient. To an observer sitting in an office, say in Africa or perhaps the Philippines, in a medium sized subsidiary of a major multinational that will almost certainly be the reaction when they see a portion of the US CEO’s remuneration being recharged to them!

In summary for corporate services or even inter-company services of various kinds, the focus to date has generally been a) whether the subsidiary has received a benefit; b) what proportion of the costs are shareholder costs that should not be charged out; c) how to allocate the costs; and d) what the mark up should be – (usually ending up in the 5-10% range). However as suggested above that is likely to be inadequate in terms of value added for certain strategic services provided by experts or senior management residing within the group.

2.2.2 Going Forward?

Surprisingly, there is an apparent dearth of articles and research on the value of services versus intangibles. It seems clear that in theory at least, the use of intangibles inter-company and the provision of inter-company services to related parties can be equally as valuable or they can be poles apart. Perhaps the differentiation between the two makes little sense these days as services are often intertwined with intangibles or are services provided with the weight of considerable know–how embedded therein.

Whether one is dealing with services or intangibles, focus must now be placed on where the key functions including the relevant decision making functions are carried out, where risks are managed and where assets are used to provide the services or intangibles in question. That may bring about more focus on valuable services and the role they play either individually or bundled with an intangible.

In appropriate situations, services can be remunerated as a percentage say of value added e.g. either based on the incremental value of a portfolio of group assets or as a percentage of Assets under Management rather like a fund manager. The author has observed a number of cases where services have been benchmarked against fund manager data and subsequently backed into a cost plus basis. In most cases such a derived cost plus would be in excess of the 5-10% norms seen in inter-company
agreements and perhaps more in the 15-30% range. Again to be clear we are only addressing those high value add services here, not the typical head office type charges. It is indeed appropriate to stratify and segregate “low” or “medium” value services.

A number of years ago the USA issued their Services Regulations under Section 1.482-9. These set out various ways of approaching inter-company services such as the Services Cost Method (“SCM”) which allowed certain low value services to be identified and provided at cost, with no mark-up or a standard mark up in the case of low value services. The regulations also provided for contingent payments somewhat dependent on results achieved. While such regulations provide flexibility one also has to consider the position of the counter-party country. Would they allow a USA service to be charged into their country on a contingency basis?

There is also the recent OECD discussion draft on low value adding services issued on November 3rd 2014 under BEPS Action 10. Like the USA Service regulations this is helpful in that it seeks to introduce a simplified benefit test and a simplified transfer pricing methodology as well as introducing helpful definitions e.g. “shareholder activities”. Helpfully, the draft also seeks to define low value-adding services as follows:

“Low value-adding intra-group services are services performed by one member or more than one member of an MNE group on behalf of one or more other group members which

• are of a supportive nature;

• are not part of the core business of the MNE group;

• do not require the use of unique and valuable intangibles and do not lead to the creation of unique and valuable intangibles; and

• do not involve the assumption or control of substantial or significant risk and do not give rise to the creation of significant risk.”

The draft goes on to give examples of these services such as accounting and auditing services, accounts processing activities, general legal services, HR

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24 Temporary regulations were issued in 2006 and finalized on 31st July, 2009, effective for tax years beginning after that date
25 OECD Discussion Draft (issued on 3rd November 2014): Proposed Modifications to Chapter VII of the Transfer Pricing Guidelines relating to low value-adding intra-group services-BEPS Action 10
26 Ibid D1-paragraph 7.46
activities etc. However note the specific exclusion of unique and valuable intangibles above. Research and development is similarly excluded.

The draft seeks to achieve consensus on a simplified benefits test, cost pooling, types of low value added activities and a possible mark-up range of cost plus 2% to cost plus 5%.

The OECD’s efforts here are commendable not only to minimise time and effort on these types of services but rather, almost by definition, forcing the attention back on higher value services and intangibles. Given the attention and difficulties or debates on cost recoveries within the Asia Pacific region it would be a huge step forward for nations to fully embrace the OECD’s deliberations in this space.

There is clearly a range of services ranging from the routine and general to the specific high value services much the same as intangibles. However the overall message in this section is not to assume that services are always lower in value and importance than intangibles and that each situation has to be evaluated based on its own facts.

2.3 Severability of Intangibles and Consideration of Network Effects

2.3.1 Severability of Intangibles

This section will further address whether certain intangibles are capable of being transferred or valued/priced on a stand-alone basis or only in combination with other intangibles.

The following paragraphs (up to the end of 2.3.1) are lifted almost entirely from the Action 8 Deliverable of the BEPS project (Guidance on Transfer Pricing Aspects of Intangibles) released in September 2014. The analysis in the paragraphs from that deliverable summarizes the issue extremely well and thus in most aspects is presented here.

There are instances where intangibles (including limited rights in intangibles) could be transferred individually or in combination with other intangibles. In considering transactions involving transfers of combinations of intangibles, the draft OECD Guidelines suggests that there are potentially two issues that can arise.27

The first of these involves the nature and economic consequences of interactions between different intangibles. It may be the case that some intangibles are more valuable in combination with other intangibles than would be the case if the

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27 OECD Guidance on Transfer Pricing Aspects of Intangibles-BEPS Action 8 2014 Deliverable-Paragraph 6.89
intangibles were considered separately. It is therefore important to identify the nature of the legal and economic interactions between intangibles that are transferred in combination.

A second and related issue involves the importance of ensuring that all intangibles transferred in a particular transaction have been identified.\(^\text{28}\) It may be the case, for example, that intangibles are so intertwined that it is not possible, as a substantive matter, to transfer one without transferring the other. Indeed, it will often be the case that a transfer of one intangible will necessarily imply the transfer of other intangibles.

It is important to identify situations where taxpayers or tax administrations may seek to artificially separate intangibles that, as a matter of substance, independent parties would not separate in comparable circumstances. For example, attempts to artificially separate trademarks or trade names from the goodwill or reputational value that is factually associated with the trademark or trade name should be identified and critically analysed\(^\text{29}\).

It should be recognised that the process of identifying all of the intangibles transferred in a particular transaction is often an exercise of identifying, by reference to written agreements and the actual conduct of the parties\(^\text{30}\).

In some situations it may be both possible and appropriate to separate transactions in tangible goods or services from transfers of intangibles or rights in intangibles for the purposes of conducting a transfer pricing analysis. In these situations, the price of a “package” under contract should be disaggregated in order to confirm that each element of the transaction is consistent with the arm’s length principle. In other situations transactions may be so closely related that it will be difficult to segregate tangible goods or service transactions from transfers of intangibles or rights in intangibles. Reliability of available comparables will be an important factor in considering whether transactions should be combined or segregated. In particular, it is important to consider whether available comparables permit accurate evaluation of interactions between transactions\(^\text{31}\).

One situation where transfers of intangibles may be combined with other transactions involves a business franchise arrangement. Under such an arrangement, one member of an MNE group may agree to provide a combination of services and intangibles to an associated enterprise in exchange for a single fee. If the services

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\(^{28}\) OECD Guidance on Transfer Pricing Aspects of Intangibles-BEPS Action 8 2014 Deliverable-Paragraph 6.92

\(^{29}\) Ibid Paragraph 6.93

\(^{30}\) Ibid Paragraph 6.94

\(^{31}\) Ibid Paragraph 6.96
and intangibles made available under such an arrangement are sufficiently unique that reliable comparables cannot be identified for the entire service/intangible package, it may be necessary to segregate the various parts of the package of services and intangibles for separate transfer pricing consideration. It should be kept in mind, however, that the interactions between various intangibles and services might well enhance the value of both.

In other situations, the provision of a service and the transfer of one or more intangibles may be so closely intertwined that it is difficult to separate the transactions for purposes of a transfer pricing analysis. For example, some transfers of rights in software may be combined with an undertaking by the transferor to provide software maintenance services, which may include periodic updates to the software. In situations where services and transfers of intangibles are intertwined, determining arm’s length prices on an aggregate basis may be necessary.

As noted in sub-section 2.2, the characterisation of a transaction as a transfer or sale of products or services or the transfer of intangibles or a combination of both does not necessarily dictate the use of a particular transfer pricing method. For example, a cost plus approach will not be appropriate for all service transactions, and not all intangibles transactions require complex valuations or the application of profit split methods. The facts of each specific situation, and the results of the required functional analysis, should guide the manner in which transactions are combined, characterised and analysed for transfer pricing purposes, as well as the selection of the most appropriate transfer pricing method. The ultimate objective is to identify the prices and other conditions that would be established between independent enterprises in comparable transactions.

### 2.3.2 Network Effects

As an example of the severability issue it is worth addressing the impact of network effects. Many MNEs operate in a very integrated manner, often across multiple borders. Accordingly, a failure to recognise the value add of the network may lead to an incorrect allocation of profits. However, network effects are extremely difficult to assess and value. Even if the value add of the network itself can be carved out it is particularly difficult to identify where that value lies. The paragraphs below briefly address this matter and explore whether the use of a profit split methodology is appropriate in such circumstances.

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32 OECD Guidance on Transfer Pricing Aspects of Intangibles-BEPS Action 8 2014 Deliverable-Paragraph 6.97
33 Ibid Paragraph 6.98
34 Ibid Paragraph 6.99
Most MNEs have a network of offices across a number of countries, often performing various and different functions in each country or office. However in certain businesses, the existence and inter-connectivity of the network of offices actually generates significant value for the business with each member of the network relying and benefiting from the existence and activities of every other member of the network., (e.g. consider a logistics business where having a presence in each of the countries is necessary to deliver value across borders to a customer in any particular country). Another scenario where the network itself may be the key value driver is social networking websites, whose base of users is considered to be a key value driver through which the social networking website generates value.

Transfer pricing for the above type scenarios would depend on the facts. However, the underlying principle to note here is that if the network is the key value driver in a business, and if each entity within the network contributes to this, then the possibility for using a profit split method as the most appropriate transfer pricing method must be evaluated.

Take the scenario of a courier express delivery company. The originating company is usually very important in driving value as the customer contracts are typically entered into the jurisdiction of the origination. However the company was able to source the customer contract or the cargo because of its ability to deliver the cargo to the required overseas location (i.e., presence of a network). Therefore the presence of the network drives value. It might even be arguable that the network drives most, or a significant part, of the value while the customer relationships are secondary (of course this may differ in different scenarios). There are undoubtedly, other factors that also drive the value, i.e. on time delivery, safety of the shipment delivery, but most of these are also dependent on the network. In such a scenario, since each and every member of the network is involved in the creation of the value, the potential use of profit split methodology has to be considered.

On the flip side, even if the delivery company has network offices in various countries, not every country (i.e., local entity) may be contributing significantly to the value driven by the network. In other words, the relative contribution to the success of the network would depend on various factors (e.g. size of operation, geographic spread of customers, level of sales, number of contracts, number of deliveries, etc.). Hence, the relative split of profits might also depend on some or all of these factors.

2.4 Contractual Terms, Risks and Functions
2.4.1. General

Contractual terms, functions and risks are at the core of the BEPS initiative namely, that profits accrue to where value is created which is normally where the important functions are carried out and where the risks are managed and controlled from. This applies equally if not more so to intangibles. These are not new concepts and indeed also came through in the 2010 OECD guidelines\(^{35}\) particularly in Chapter IX of those guidelines dealing with Business Restructurings. However the BEPS initiative has taken the issue to a whole different level and has managed to both increase worldwide awareness of the issues as well the momentum to take action against instances of BEPS. In fact on 31 July 2015, TP Week provided some details on a survey they had conducted on MNEs. This indicated that 54% of the respondents were already taking steps based on the BEPS drafts and that they expected the top four focus areas to be TP documentation; risk and re-characterisation; PE status and the transfer pricing of intangibles\(^{36}\).

It is clear that for intangibles it also critical to document and fully understand the FARS (Functions, assets and risks) and contractual aspects in any given scenario such that valid comparisons can be made with potentially comparable uncontrolled transactions between independent parties. If, as is often the case with intangibles, valid comparables do not exist, then the same diligence will facilitate another basis of valuation.

Over the last 10 -20 years, taxpayers, their advisers and tax authorities around the world along with the OECD, UN and NGO’s have spent considerable time reviewing contracts and debating over functions, assets and risks. Taxpayers and their advisers have also spent many hours producing long voluminous reports trying to justify their transfer prices but in the author’s view and with due respect, quite often lacking the desired level of specificity and clarity in the key areas of contracts, functions and risk. Also and with the same due respect to taxing authorities, tax officers naturally do not have the knowledge of the business and may lack the business experience to ascertain the important functions or real value drivers in the business. Therefore they often have little choice other than to focus on picking on representations made in the report, attacking methodologies and comparables sets and as considered appropriate, coming up with their own comparables or valuations.

The recent OECD drafts on the various BEPS action points related to intangibles are

\(^{35}\) *OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations, July 2010*

to be commended as they set out a welcomed roadmap or steps for taxpayers and hopefully, tax authorities to follow. For example the OECD Discussion Draft on Revisions to Chapter 1 of the Transfer Pricing Guidelines (Including Risk, Recharacterisation and Special Measures issued on 19th December 2014 contains some excellent guidance in this regard and we refer to that in the paragraphs below.

2.4.2. Contracts

The aforementioned OECD discussion draft starts with a discussion on comparability as follows:

“There are two key aspects in such an analysis: the first aspect is to identify the commercial or financial relations between the associated enterprises and the conditions attaching to those relations in order that the controlled transaction is accurately delineated; the second aspect is to compare the conditions of the controlled transaction with the conditions of comparable transactions between independent enterprises”37

It goes on to state that to achieve the above requires an examination of the contractual terms between the parties and the conduct of the parties. Where the conduct is not consistent with the contractual terms, further analysis is required to identify the actual transaction. Where there are differences between contractual terms and factual substance, the conduct of the parties in their relations with one another, and what functions they actually perform, the assets they actually employ, and the risks they actually assume and manage, in the context of the consistent contractual terms, should ultimately determine the actual transaction38.

So the starting point is clearly the contract between the parties but if the conduct of the parties is inconsistent with the contract or there is no written contract or the contract is silent in some respect then the transaction has to be identified by the conduct. Ultimately this requires examination of “the functions performed by the parties to the transaction, taking into account assets employed and risks assumed and managed, including how those functions relate to the wider generation of value by the MNE group to which the parties belong, the circumstances surrounding the transaction, and industry practices”39.

37 OECD Discussion Draft on Revisions to Chapter 1 of the Transfer Pricing Guidelines (including Risk, Re-Characterisation and Special Measures –BEPS Action 8-10 D1 paragraph 1
38 Ibid D1 paragraphs 2-5
39 Ibid D1 paragraph 10
2.4.3. Functions

Identifying the key functions creating value is not always an easy task in any situation and the position is no different with intangibles. There are often many functions performed in any organisation or process so the exercise has to be one of identifying the important functions by sifting through the process of creation/production/exploitation and picking out those elements that require creativity, decision making, the application of skill sets, experience or know-how or the speed and efficiency that differentiates the organisation and generates returns. There are typically many support and administrative functions that go along with any process but these are generally regarded as routine and not where the focus must be in identifying value creation. Similarly there may be activities that are necessary functions along the critical path, for example, some computer programs which have to be re-written or tweaked and performed by programmers. However the programmer may be working under the instruction and guidance of a senior engineer who is masterminding the process to achieve the vision and ideas generated by say a chief scientist. In such a scenario the key functions are likely to be those of the scientist and the senior engineer and not necessarily the programmer where his effort might be relatively routine and replicated easily.

In order to identify the important functions properly, a sound understanding of the business is required together with a good understanding of the relevant process involved ie “A to Z steps”. This is also particularly true in the case of intangibles. Through the process of creating intangibles the new guidance would direct us to look at the development, enhancement, maintenance, protection and exploitation functions (i.e. the “DEMPE” functions.)

An example, based loosely on a real case (in which the author was involved) should help to illustrate. This example does not refer to the DEMPE terminology but covers the same areas. This was an MNE group company developing new IP that was licensed to other group companies around the world, which in turn licensed to end customers, often bundled with other services or products. For the purpose of this example, assume that the IP development in question was coordinated and controlled from one primary centre although two other jurisdictions were significantly engaged in some of the development effort under contract to the primary centre. One of those two jurisdictions was also significantly involved in the launch of the product.

So based on the real life case, the first step (re identification, the IP in question was clear to all) was to map out the entire development process and then identify the important functions in the process, starting from concept, through planning and design, development and then following beta testing, into implementation and launch. The process is summarised in the two columns to the left in the chart below.
and to the right of those the key functions are summarised. (Note in the real case there were other important functions –but this is for example only)

<table>
<thead>
<tr>
<th>Functions –A Development Spectrum -Identify Importance ,Value and Location</th>
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<tbody>
<tr>
<td><strong>Conceive</strong></td>
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<td><strong>Plan</strong></td>
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<td><strong>Develop</strong></td>
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<td><strong>Manage</strong></td>
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<td><strong>Analyze</strong></td>
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Having identified the process and important functions the next steps involved assessing the relative value added at each point and the locations where the decisions were taken and process controlled from and the people who carried out the work. Let us assume for argument’s sake that everything in the example was done in the primary centre, Location 1, other than two functions. Locations 2 and 3 carried out certain R&D work based on the designs of Location 1 people and under specific instruction and agreed budget from those Location 1 personnel. Location 3 also played a significant role in launching the new product.

So simply put, for transfer pricing purposes one might expect Locations 2 and 3 to receive a routine return for their contract R&D work (which could be benchmarked against comparable entities using the Transactional Net Margin Method (“TNMM”) or in USA parlance, the Comparable Profits Method (“CPM”). In the real case the Profit Level Indicator (“PLI”) was a mark up based on costs incurred by Locations 2 and 3. It might also be possible to find reasonable comparables for Location 3 for its market-based and launch activities, but otherwise the residual profit (after Locations 2 and 3 were remunerated for their development work) could have been split in some manner between Location 1 (obtaining a higher share) and Location 3.
The real case ended up as a major tax audit over a couple of years in one of the main countries involved. The audit was finally resolved in the taxpayer’s favour with minimal adjustments, thanks to the due diligence exercised by the taxpayer and its advisors in carefully assessing and documenting the functions and risks and the locations where they were performed and managed. In particular, the MNE was able to demonstrate that the important functions were undertaken by highly qualified senior personnel based in Location 1. The tax authority concerned did in fact seek to apply a profit split partly by seeking to play down the importance of Location 1 personnel functions but did not succeed with such arguments.

In the author’s experience to date, few taxpayers in Asia (and perhaps few tax authorities in Asia) have consistently demonstrated the willingness, patience or understanding to do the specific type of analysis as demonstrated by the MNE above, as well as they might. Yet such due diligence can save everyone a great deal of time, money and effort and can easily be depicted on charts and power-point presentations including flowcharts without having to draft up pages and pages of narrative which often suffer from ambiguity. Perhaps many taxpayers and their advisers have held on to the belief that producing volumes will impress the authorities into believing that taxpayers have done their homework and that is undoubtedly true to an extent, possibly even to the stage of offering penalty protection against TP adjustments. That is changing; with the BEPS initiative as the real harbinger of the change. Going forward, tax authorities in Asia and elsewhere are likely to want to see much more specific analyses from taxpayers and in due course will have more information at their disposal (e.g. CbCR, TP Master and Local files) to help them probe deeper. In the case of intangibles and so called “patent box” or “innovation box” regimes this will also be important if the modified nexus approach\(^{40}\) for such regimes is implemented. More on that in Section 6 of this paper.

Functions and the management of risks and assets used, weigh heavily in terms of justifying the transfer price. If we revert again to the example above let’s assume Location 1 established and inter-company licence fee of 100 as represented by the green dotted line below. However on a closer analysis it appeared that Location 1 did not in fact come up with the concepts or designs but Locations 2 and 3 provided these jointly. In other words the functions in Location 1 fell short of what was presented to justify the 100 price and a TP adjustment would be required as depicted below.

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2.4.4. Risks

The analysis is rather similar with respect to risks. However, risks can give rise to difficulties in a transfer pricing analysis partly because risks can be hard to identify and perhaps even more difficult to assess their potential impact.

Like functions, determining the impact of risk and the significance of how risk and uncertainty may affect a transfer price depends on the broader functional analysis of how value is created by the multinational group and the role of the specific entities within the MNE group in contributing to that value.\(^\text{42}\)

The OECD discussion draft of 19\(^{th}\) December 2014 sets out a very useful framework for analyzing risk, replicated here as follows:\(^\text{43}\)

- Taking into account the nature and sources of risk, what are the specific risks included in the commercial or financial relations of the parties?
- How are those specific risks allocated in contractual arrangements? How are the risks assumed? Do the specific risks relate to operational activities from which the

\(^{41}\) OECD Discussion Draft on Revisions to Chapter 1 of the Transfer Pricing Guidelines (including Risk, Re-Characterisation and Special Measures –BEPS Action 8-10 -D.2 paragraph 38

\(^{42}\) Ibid-D.2.4 paragraph 48

\(^{43}\) Ibid–D.2 paragraph 40
risks arise?

- What is the potential impact of those specific risks?
- How is each risk actually managed by the members of the MNE group? How does risk management related to the risk influence the occurrence or the impact of the risk?
- Does the party contractually assuming the risk either (a) perform the operational activities from which the risk arises, (b) manage the risks, or (c) assess, monitor, and direct risk mitigation?
- What are the actual transactions undertaken? Are the contractual arrangements in relation to the risk allocation, the operational activities to which the risk relates and risk management aligned with the conduct of the parties?

As indicated earlier risks can be hard to identify. The OECD discussion draft again offers help in this regard and sets out different types of risks:

a) Strategic risks or marketplace risks. These are largely external risks caused by the economic environment, political and regulatory events, competition, technological advance, or social and environmental changes.

b) Infrastructure or operational risks. These are likely to include the uncertainties associated with the company’s business execution and may include the effectiveness of processes and operations.

c) Financial risks

d) Transactional risks. These are likely to include pricing and payment terms in a commercial transaction for the supply of goods, property, or services.

e) Hazard risk. These are likely to include adverse external events that may cause damages or losses, including accidents and natural disasters. Insurance may well mitigate some of these risks.

So a similar analysis to functions is required specifying the key risks as accurately as possible, assessing their potential impact and determining the entity or entities that have a) the financial capacity to take on the risks in question and b) have the ability and actually manage and control those risks. Control over risk should be understood as the capability to make decisions to take on the risk and decisions on whether and how to respond to or mitigate the risk. However control should not be interpreted as being limited to the decision to adopt risk mitigation measures, since in assessing risks, businesses may decide that the uncertainty associated with some risks, after being evaluated, should be taken on and faced with little or no mitigation

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44 OECD Discussion Draft on Revisions to Chapter 1 of the Transfer Pricing Guidelines (including Risk, Re-Characterisation and Special Measures –BEPS Action 8-10 -D.2 paragraph 42
in order to create and maximise opportunities.\textsuperscript{45} There is a clear need to think through what independent parties might do such as entering into shorter term agreements or using price adjustment clauses to minimize risk\textsuperscript{46}. These aspects will be further considered in Section 3 below.

While the case study presented under the Functions section above preceded the BEPS initiative, a similar analysis to functions was undertaken for risks. Keeping with the outline above involving Locations 1, 2 and 3 a review was undertaken to identify the major risks arising throughout the same process as that in place for the functions. For example see the chart below.

![Major Risks - A Spectrum...Identify Significance and How and Where Managed](chart)

The table above addresses some of the risks that may have existed throughout the R&D process. There were of course, additional enterprise wide risks arising from the R&D that also needed to be addressed, such as strategic risks and other financial risks.

\textsuperscript{45} OECD Discussion Draft on Revisions to Chapter 1 of the Transfer Pricing Guidelines (including Risk, Re-Characterisation and Special Measures –BEPS Action 8-10 -D.2 Paragraph 39

\textsuperscript{46} OECD Discussion Draft Hard-to-value intangibles (issued 4 June 2015)- BEPS Action 8
2.4.5. Summary

The BEPS initiative signals the beginning of a more disciplined and focused approach in identifying and valuing the important functions and risks and the locations where these are performed and actively managed. Specifics will be needed and well documented with ambiguity minimised. Where owners of intangibles used in MNE groups claim to be entitled to most of the return from those intangibles, they will have to show much more justification than simply legal rights and administering legal protection. In the author’s view this is a matter of reviewing the entire process by which the intangibles come into existence in an enterprise going right through to exploitation and monitoring and assessing key functions and risks at each stage.

3.0 VALUATION METHODOLOGIES

3.1 Introduction

In Section 4, the use of different TP methodologies for pricing intangibles will be briefly discussed. That section will also consider the use of databases and comparable searches relating to intangibles. The limitations of such databases and the lack of comparables for many intangibles is noted there and frequently cited in other literature. This is due to the unique, valuable and differentiating features of many intangibles that contribute to the super profits earned by the companies owning those assets. Where there are no meaningful comparables it is necessary to look to valuation techniques whether the intangibles transaction under scrutiny is a sale, transfer, acquisition or a license of the intangibles.

Nevertheless valuation issues have given rise to numerous debates with tax authorities, historically more so in the high tax Western jurisdictions and Japan but now, more commonplace in Asian countries particularly in the larger jurisdictions of China and India. The focus of the debates in Asia is still emerging and a little more obscure than in Western jurisdictions. In the latter, experience has shown that the common areas of dispute include:

- Identification of value drivers and the relevant intangibles
- Projections of income and cash flows e.g. overly optimistic, overly pessimistic
- Discount rates used
- Useful life of the intangibles
- Selections of comparables
As part of the BEPS initiative, the OECD has also recognised some of the difficulties by explicitly issuing its discussion draft in June 2015 on “Hard-to-value-Intangibles.\textsuperscript{47}

That will be discussed later but as a starting point to this section, it is important to stress that sound valuations and the preferred approaches again depend on gaining a thorough understanding of the taxpayer’s business and industry, the functions, risks and assets, what drives success including key value drivers and reliable and relevant financial information.

It is also noted that in this section, searches for either internal or external comparables and relevant databases are not discussed. These are addressed in Section 4 below.

3.2 Valuation Methods Addressed

The following sections will cover various valuation approaches and techniques including:

- The relevance and usefulness of accounting valuations
- Cost based approaches
- Market Based Approaches
- Income Based approaches including discussion on:
  - Relief from royalty methods
  - Multi-period excess earnings method
  - Discounted cash flow analysis
    - Using financial projections
    - Assessing estimated useful lives
    - Selecting discount rates;
- Greenfield Method of Valuations
- Valuation of Early Stage Technologies
- Real options
- Game theory
- German Transfer of Functions Rules
- Rules of thumb

It should be noted that valuations is a major topic in its own right and the paragraphs that follow really cannot do justice to the topic. At best the comments that follow should be regarded as a summary to familiarise readers with some of the issues and approaches. There are of course many learned articles and materials on valuations. Some approach it from a tax perspective requiring a focus on tax law; related case

\textsuperscript{47} OECD Discussion Draft on Hard-to-value intangibles (issued 4 June 2015)- BEPS Action 8
law and OECD guidelines; others from a Financial Reporting perspective and generally accepted accounting principles (‘GAAP’) including International Financial Reporting Standards (‘IFRS’), USGAAP and guidelines issued by various accounting bodies. There are also valuations that are needed to conform to Bank regulations, local regulations and other laws.

As a tax consultant the author has found that some very useful, yet easy to understand references, are contained in Chapter 3 of the PwC sponsored book “Mastering the Intellectual Property Life Cycle”48 and the Accounting and Valuation guide issued by the AICPA “Assets Acquired to be Used in Research and Development Activities”.49

3.2.1 The Relevance and Usefulness of Accounting Valuations for Transfer Pricing purposes

As a provocative starting point and a personal perspective, the author has rarely found accounting valuations of intangibles particularly useful for transfer pricing or tax purposes. That in part, has usually been attributed to differences of views over the same points as noted in 3.1 above, namely identification of the intangibles, identification of cash flows, discount rates used etc. Also in the past there seemed to be an accounting bias towards recognition of goodwill rather than say, to particular technology, primarily due to differences in the amortisation of such items for accounting purposes. In addition there has always been the issue of pre and post – tax valuations, a thorny and debateable subject in itself, and discussed later in this paper [refer below at 3.2.4.9.]

There is a useful paper50 dated March 2011, presented by Dr William F. Finan and Susan Launiau to Working Party 6 of the Committee on Fiscal Affairs. The paper discusses the convergence (or lack thereof) of valuations for transfer pricing purposes and other purposes e.g. Financial Statements.

The OECD has also recognised in their BEPS Action 8 deliverable that differences may exist for tax and accounting purposes. The relevant paragraph is set out below:51

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49 AICPA-American Institute of CPAs (www.aicpa.org) guide issued in 2013 focused on measuring the fair value of In-Process R&D (IPRD) assets for financial reporting purposes
50 “Valuations of Intangibles for Transfer Pricing Purposes: Convergence of Valuations for Transfer Pricing Purposes with Valuations for Other Purposes” – Presentation to WP6 of the the CFA by Dr William F. Finan and Susan Launiau
51 OECD Guidance on Transfer Pricing Aspects of Intangibles-Action 8 2014 Deliverable-paragraph 6.7
“6.7 Intangibles that are important to consider for transfer pricing purposes are not always recognised as intangible assets for accounting purposes. For example, costs associated with developing intangibles internally through expenditures such as research and development and advertising are sometimes expensed rather than capitalised for accounting purposes and the intangibles resulting from such expenditures therefore are not always reflected on the balance sheet. Such intangibles may nevertheless be used to generate significant economic value and may need to be considered for transfer pricing purposes. Furthermore, the enhancement to value that may arise from the complementary nature of a collection of intangibles when exploited together is not always reflected on the balance sheet. Accordingly, whether an item should be considered to be an intangible for transfer pricing purposes under Article 9 of the OECD Model Tax Convention can be informed by its characterisation for accounting purposes, but will not be determined by such characterisation only. Furthermore, the determination that an item should be regarded as an intangible for transfer pricing purposes does not determine or follow from its characterisation for general tax purposes, as, for example, an expense or an amortisable asset. “

Having noted that accounting valuations are not always appropriate for transfer pricing purposes as acknowledged earlier, the USA AICPA Guide is a very useful guide as to valuation principles for in-process R&D. Original guidance on this was published by AICPA as a practice aid in 2001 but the new guide supersedes that and reflects authoritative guidance on the topic (i.e. for financial reporting purposes) up to May 1st 2013. It identifies requirements in the Financial Accounting Standards Board (“FASB”) Accounting Standards Codification, the authoritative source of U.S. accounting reporting standards.

In summary, accounting valuations that are available should not be ignored but are far from determinative on the matter.

3.2.2 Cost Based Approaches

The AICPA Guide states that for accounting purposes the cost approach should only be used to value single purpose assets used in R&D or assets that can easily be substituted through replacement or reproduction or where the prospective financial information (“PFI”) does not exist or is simply not robust.53 For most R&D type products this makes sense, as the goal is normally to develop commercial products that will produce attractive income streams.
In the tax world, it is also fair to say that cost based approaches are generally not viewed positively primarily because the approach often does not reflect the value created through the R&D process. It’s also not very appropriate for intangibles like brands that cannot be readily replaced.

However the cost method may be justified in situations where projected income and cash flows simply cannot be derived. Logically it also makes some sense in that an investor would typically not pay anymore for an asset than he would need to pay to replace it or rebuild it, given time and resource. It therefore tends to be a useful valuation alternative for items such as internal software used to support other applications; website construction and even building customer relationships.

Early stage technologies (especially greenfield) that have yet to go through trials or beta testing and with no proven market may also be suitable for the cost approach.

There are three basic types of cost methods, namely:

- Historical cost—which is the cost of purchase or build
- Reproduction cost—which is the cost to construct a duplicate using the same inputs
- Replacement cost—being the cost to construct something that can do the same job but using up to date methods and materials

In situations where a cost based method may be appropriate the replacement cost method tends to be the most favoured basis.

3.2.3. Market Based Approaches/Market Capitalisation Approaches

Some commentary from the AICPA guide helps to provide some context to these types of approaches to valuing transfers of IP between related parties.

“In some cases, estimates of fair value may be based on the prices of single-technology or single-product companies that are publicly traded. There may also be markets for the purchase of early-stage discoveries from academic institutions or businesses. Markets are evolving for the exchange of intellectual property, and prices from such markets may also be a useful input. These prices may provide indications of fair value for similar early-stage discoveries. Besides market prices for
comparable assets, market-derived data can provide inputs to valuing an asset using the income approach (for example, royalty rates derived from licensing arrangements).”\(^{54}\)

### 3.2.3.1 Market Based Approaches

The fundamental issue with market-based methods is simply due to the fact that the very uniqueness of some intangibles means that no comparable active market exists. Even when something seemingly comparable in the market does exist there are often facts that are not available publicly that make them dangerous to use. For products or materials in homogeneous markets the market approach makes sense but these are rare instances.

The AICPA guide\(^{55}\) also has some further helpful views on this topic as follows:

“As stated in FASB ASC 820-10-55-3A, the market approach uses prices and other relevant information generated by market transactions involving identical or comparable (that is, similar) assets, liabilities, or a group of assets and liabilities….”

The guide\(^{56}\) goes on to discuss the example of early stage technologies:

“The prices in recent transactions of comparable technology may be a reasonable basis for estimating the fair value of an early-stage technology. In such circumstances, the valuation specialist would study the characteristics of the asset and the stage of its development to ensure that the subject and comparable assets are reasonably similar. However, sales prices of comparable IPR&D assets are seldom available because either (a) IPR&D assets typically transfer with the sale of a business, not individually, or (b) when they do transfer individually, they may not be comparable to the subject asset. Therefore, the market approach is seldom used to value IPR&D assets, unless exchanges of individual assets comparable to the subject asset can be observed.”

In situations where a company has a history of being acquisitive in acquiring entities that have significant intangibles, one might be able to look at the pricing of those deals to derive some type of internal comparable but given many other factors that

\(^{54}\) AICPA-American Institute of CPAs (www.aicpa.org) guide issued in 2013 focussed on measuring the fair value of In-Process R&D (IPRD) assets for financial reporting purposes-paragraph 1.12

\(^{55}\) AICPA-American Institute of CPAs (www.aicpa.org) guide issued in 2013 focused on measuring the fair value of In-Process R&D (IPRD) assets for financial reporting purposes-Paragraphs 1.10-1.12

\(^{56}\) Ibid- paragraphs 1.10-1.12
drive deal prices, it would seem necessary to look at a number of deals over a significant period to derive anything meaningful.

While it is difficult enough to find comparables in Western jurisdictions market-based approaches are really not common at all in Asia as there is almost a complete dearth of meaningful comparables. There are of course other “market based” approaches using Comparable Uncontrolled Transactions (“CUTs”) or CUPs (Comparable Uncontrolled Prices) derived from market data that are often applied in licensing scenarios to benchmark royalties or franchise fees. These are discussed further under the “relief from royalty” approach below and in Section 4 below.

3.2.3.2 Market Capitalisation Method

The market capitalisation method at its simplest, looks to the value of the company on the stock market and then basically seeks to deduct the fair value of other assets (i.e. those not being transferred) to get to a valuation for the intangible(s) in question.

As one might expect there are some significant concerns around this method in that ascertaining the fair values of assets not being transferred is not so simple or even accurate. In addition, it is often very difficult to isolate a particular intangible in this manner, assuming that it is a discrete intangible that is being transferred.

The U.S. Internal Revenue Service (“IRS”) have certainly sought to use this method before along with a number of other countries but on most occasions it has probably been used as a corroborative procedure or sense check rather than a primary valuation method. The author has also used it in practice as a sense check.

3.2.4. Income Based Approaches

3.2.4.1 Introduction

Income based approaches to valuation of intangibles are almost universally acceptable in theory to most tax authorities. This section will cover the various techniques most of which revolve around forecasted data, assumptions and discount rates. We will examine the topic in the following categories

-Definition of income based approaches
-OECD’s perspective on income based approaches
-Assumptions in income based approaches
-Accuracy of financial forecasts
-Useful life of intangibles and terminal values
-Relief from royalty methods
3.2.4.2 Definition of income based approach

The income approach is based on the economic principle of anticipation (also called the principle of expectation). In this approach, the value of the intangible is the present value of the expected economic income to be earned from the ownership of the intangible property. As the name of this economic principle implies, the investor "anticipates" the "expected" economic income to be earned from the intangible. This expectation of prospective economic income is converted to a present net worth—i.e., the value of the intangible.\(^{57}\)

3.2.4.3. OECD’s perspective on valuation techniques using income based approaches

Valuation techniques that involve the discounted value of projected future cash flows derived from the exploitation of intangibles are generally preferred in the absence of market comparables and assuming the technique is properly applied. There are many variations of these valuation techniques. In general terms, such techniques measure the value of an intangible by discounting (to present value) the expected future cash flows the asset may generate over its expected remaining lifetime. Such a valuation requires, among other things, realistic and reliable financial projections, projected growth rates, discount rates, the useful life of the intangible, and the tax effects of the transaction. Moreover it requires consideration of terminal values when appropriate. Depending on the facts and circumstances of the individual case, the calculation of the discounted value of projected cash flows derived from the exploitation of the intangible should be evaluated from the perspectives of both parties to the transaction in arriving at an arm’s length price. In theory, the arm’s length price will fall somewhere within the range of present values evaluated from the perspectives of the transferor and the transferee.\(^{58}\) While this two-sided type of methodology may not be very practical or even used frequently, it is interesting to note that it is actually enshrined in the German Transfer of Functions Rules.\(^{59}\)

3.2.4.4. Assumptions in income based approaches (and its limitations)

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\(^{57}\) Adapted from “A Guide to Valuation of Assembled Workforce Intangible Property” by Robert F Reilly

\(^{58}\) OECD Guidance on Transfer Pricing Aspects of Intangibles-BEPS Action 8 2014 Deliverable - Paragraph 6.154

\(^{59}\) See further at 3.2.9. below
As mentioned above, income based approaches rely on forecasts and inevitably a number of assumptions typically need to be made to arrive at a reasonable valuation of the intangible. The reliability of the intangible value produced can be particularly sensitive to the reasonableness of the underlying assumptions and estimates on which it is based and on the due diligence and judgment exercised in confirming assumptions and in estimating valuation parameters

In summary, the income approach has a number of layers of uncertainty: projections, useful life, discount rates etc. In addition it can also be difficult to identify or isolate income streams for a specific intangible. Nevertheless it remains a favoured approach for tax purposes and is widely used and accepted.

3.2.4.5. Accuracy of financial forecasts

In valuations it is usually advisable to use the financial forecasts that are prepared for business purposes (e.g., management plans) rather than forecasts prepared for say tax purposes. OECD also supports this in paragraphs 6.160 and 6.161 of the Action 8 deliverable issued in September 2014.

Generally, for business planning purposes, a number of factors would be considered in developing the forecasts including the general economy, the past trend of profits / cash flows earned by the company (with or without the use of the intangible) and an expected growth rate.

Whenever IP valuations are challenged by tax authorities, the financial projections and discount rates used are typically among the main areas of focus. Often taxpayers display bias in their projections depending on whether they would prefer a low valuation (pessimistic bias displayed) or a high valuation (optimistic bias). Also from experience, it has to be said that some taxpayers do not take enough care over the preparation of forecasts. Others claim that it is impossible to provide any type of forecast at all. The author has found that the latter excuse is rarely plausible; running a business usually requires at least some sense of potential outcomes. Surely, if a company chooses to buy, own or develop an intangible, senior management must have had some financial outcomes or hopes in mind however vague or risky but outcomes nevertheless. Tax officials are also likely be sceptical faced with assertions that no financial forecast data was available.

In the author’s experience it is nearly always possible to produce or improve upon some form of forecasts for this purpose. Some simple steps can also help the process as follows:

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OECD Guidance on Transfer Pricing Aspects of Intangibles-BEPS Action 8 2014 Deliverable-Paragraph 6.156
• Identify the major uncertainties
• Assess probability of outcomes e.g. at minimum identify pessimistic, likely and optimistic
• Test assumptions made
• Risk adjust: possibly through discount rate or projections
• Assess economic life and likely terminal values
• Document all rational and calculations

3.2.4.6 Useful life of intangibles and terminal values

Another critical factor in the use of income based valuation methods is determining the useful life of the intangible in question and any significant terminal value.

The useful life of a particular intangible can be affected by many factors including the nature and duration of the legal protection afforded the intangible, the rate of technological change in the industry and by other factors affecting competition in the relevant economic environment\(^61\).

Where specific intangibles contribute to continuing cash flows beyond the period for which reasonable financial projections exist, a terminal value for the intangible related cash flows may need to be calculated. Where terminal values are used in valuation calculations, the assumptions underlying their calculation should be clearly set out and the underlying assumptions thoroughly examined, particularly the assumed growth rates\(^62\).

There are intangibles that have a relatively short limited life. For example, many software applications are only good for a matter of a few years before they are surpassed by the next generation technology. In other cases the value of the old software may never truly disappear if the next generation software was built upon the old and some of the old code remains embedded of necessity in the new technology. This is often known as technology that has a “long tail”. The technology or software no longer has the value it had when it constituted the generation in use but because elements of it survives in the new code, it continues to have some value albeit perhaps relatively small and declining over time. This is actually quite a common scenario that the author experienced quite frequently in practice. That is, one company in a MNE group (the transferee) would acquire technology from another entity (the transferor) in the same group with a view to taking on the next stage of development. The transfer might be outright or by way of a license of the

\(^{61}\) OECD Guidance on Transfer Pricing Aspects of Intangibles-BEPS Action 8 2014 Deliverable-Paragraph 6.172
\(^{62}\) Ibid Paragraph 6.174
old technology from the transferor. In either case the transfer or license has to be valued and therefore one needs to evaluate a) just how much of the old technology is to be replaced or retained and b) over what time frame. Thus the value of the old technology may be said to decline over time as the new modifications/code replace the old. However some elements of the old may remain for a very long time and where its contribution remains obvious that should be factored into the valuation and terminal value calculations.

3.2.4.7. Relief from Royalty Method

The relief from royalty method is partly a market based approach as well as an income based one. This method of valuing owned intangibles is used fairly extensively where there is a comparable license in the market place so in markets like India where such comparables are extremely hard to find, the use of the methodology is rare. Even in some Western jurisdictions its use has become less common than perhaps it was in the past.

At face value it is probably the simplest of valuation methods and determines the value based upon the hypothetical royalties that are saved by owning the asset. Essentially, you need a comparable royalty rate from the market, good revenue forecasts, the expected useful life of the asset and the discount rate (see further below). Then you can simply multiply the forecasts by the royalty rate and then calculate the present value of the result. Your valuation in a nutshell. Of course, all the inputs noted have their own issues and difficulties!

Also already observed, good market comparables for many intangibles simply don’t exist and even when you can find comparables, the data may not be sufficient to properly evaluate the royalty rate and potential adjustments needed.

The method does have a place though. In the authors view, with a large enough population sample in the comparables, it is quite useful for valuing industrial and commercial brands though less so for retail. It is also quite useful for technology or software used which is used internally or for systems which are not particularly unique. In these types of cases there are usually quite good comparables available in the available databases. Note the discussion on the use of databases at Section 4.2.

3.2.4.8. Multi-Period Excess Earnings Method (‘MEEM’)
This method could simply be regarded as another variant of the discounted cash flow approach but is worth a specific mention for the reader’s familiarity as it is referred to by some tax authorities and is quite often the most practical approach to single out individual intangibles. The AICPA guide also has a good summary of the method as follows:

“ In cases when there is an identifiable stream of prospective cash flows for a collection of assets, a multiperiod excess earnings method may provide a reasonable indication of the value of a specific asset. Specifically, under the multiperiod excess earnings method, the estimate of an intangible asset’s fair value starts with the PFI (prospective financial information) associated with a collection of assets, rather than a single asset. Contributory asset charges, also referred to as economic rents, are then commonly deducted from the net (or after-tax) cash flows for the collection of the associated assets to isolate remaining or "excess earnings" attributable solely to the intangible asset being valued.

The contributory asset charge is a deduction for the contribution of supporting assets (for example, net working capital, fixed assets, customer relationships, trade names, and so on) to the generation of the prospective cash flows. Contributory asset charges should be applied for all assets, including other intangible assets, which would be required by market participants to generate the overall cash flows of the collection of assets. The excess earnings, net of the charges for contributory assets, are ascribed to the asset being valued and discounted to present value.”

The explanation above should be clear. Assuming the total cash flows can be reasonably estimated, the main difficulty with the method is the possibility or even likelihood of being unable to recognise all the elements in the contributory asset charges. There may be multiple intangibles to which the excess income has to be allocated in some manner.

3.2.4.9 Discounted Cash Flow Analysis

Discount rates are used to determine the present value of the future projections. It is one of the key factors that needs to be determined carefully as a small change in the discount rate can have a significant impact on the valuation of the intangible property. Selecting the discount rate is really an exercise in pricing risk.

There is no single measure for a discount rate to apply to intangibles that is appropriate for transfer pricing purposes. Neither taxpayers nor tax administrations

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63 AICPA-American Institute of CPAs (www.aicpa.org) guide issued in 2013 focused on measuring the fair value of In-Process R&D (IPRD) assets for financial reporting purposes-paragraph 1.20
should assume that a discount rate that is based on a Weighted Average Cost of Capital (“WACC”) approach or any other measure should always be used in transfer pricing analyses. Instead the specific conditions and risks associated with the facts of a given case and the particular cash flows in question should be evaluated in determining the appropriate discount rate. The discount rate should reflect the level of risk in the overall business and also the expected volatility of the various projected cash flows under the circumstances of each individual case. Since certain risks can be taken into account either in arriving at financial projections (but see next paragraph) or in calculating the discount rate, care should be taken to avoid double discounting for risk.

Most practitioners adjust the discount rate for the risk factors to arrive at a valuation. Some however prefer to adjust the expected cash flows for risk using a risk-adjusted process similar to that applied to a discount rate. In theory, all other things being equal they should be the same but they rarely are due to imperfections in the approaches. Practitioners adjusting the cash flows tend to simply look at possible scenarios, assign probabilities and come up with the expected cash flow to be discounted at the risk free rate. However the argument against that approach is that the cash flows are still “expected” flows and therefore carry inherent risk. Therefore the purist would want to calculate what the certain cash flows would be and then discount that at the risk free rate. Trouble is that to achieve that practically, most simply adjust the cash flows subjectively to what they think the minimum (or “certain”) cash flow will be as a proxy to eliminate uncertainty.

Some have looked at establishing the likely cash flows through the use of Monte Carlo simulation. This is a probability analysis performed by running a number of variables through a mathematical model in order to determine the different outcomes. By using Monte Carlo simulations, decision makers are able to determine the range. The simulation is run until there are enough outcomes for a probability distribution curve. Usually, computers are used to run the formulas, because the Monte Carlo simulation can be run thousands of times in order to cover all possible outcomes.

Further discussion on this topic is outside the scope of this paper and we will simply focus on the discount rate method henceforth. However a good reference is provided in the footnote for those wishing to review the issue further.

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64 OECD Guidance on Transfer Pricing Aspects of Intangibles-BEPS Action 8 2014 Deliverable – Paragraph 6.169
65 Ibid Paragraph 6.170
66 Readers are referred to “Valuation Approaches and Metrics: A Survey of the Theory and Evidence ” by Aswath Damodaran 2005
**Capital Asset Pricing Model (“CAPM”)**

The CAPM is the most widely used model to derive discount rates. CAPM derives a cost of equity and a cost of debt and uses the percentage weightings of debt to equity to arrive at the overall Weighted Average Cost of Capital (“WACC”) of a company.

Briefly, the cost of equity can be built up, starting with the risk free rate of return adding risk premiums as appropriate which may include an *equity risk premium*, a *size premium* and a *company specific premium*.

**Equity Risk Premium**

The Equity risk premium is the excess return that an individual stock or the overall stock market provides over a risk-free rate. This excess return compensates investors for taking on the relatively higher risk of the equity market. The size of the premium will vary as the risk changes in a particular stock, or in the stock market as a whole. The effect of this is that high-risk investments are compensated with a higher premium\(^67\). Since the expectations of the average investor are not directly observable, the equity risk premium can be inferred based upon historical return data. Data like this is often captured by many valuation houses and available in Yearbooks produced by them.\(^68\) A beta factor is then often applied. Beta is a measure of the volatility of a stock’s return relative to the market. However these are only available for quoted companies, not private companies. However you can find and use leveraged industry specific betas in the calculation if a true comparable is not out there.

**Size Premium**

If applicable, a size premium can be applied based upon the historical return of small to medium capitalized stocks over general large-capitalized stocks where applicable.

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\(^{67}\) [http://www.investopedia.com/terms/e/equityriskpremium.asp](http://www.investopedia.com/terms/e/equityriskpremium.asp)

\(^{68}\) *For example in the USA data in yearbooks produced by Ibbotson Associates or Duff and Phelps*
**Company Specific Premium**

A company specific risk premium is applied to incorporate certain risks that are distinctive to a company. The larger and more diversified a company, industry benchmarks can generally serve as a proxy for the company specific risk premium.

**Cost Of Debt**

The cost of debt is the after tax financing cost so that calculation is relatively well understood.

*Deriving the WACC*

Once the cost of equity and cost of debt have been calculated, the WACC is a simple weighted average of the two. Note that (as we will see further in this paper), it is important to remember that the WACC is an after-tax measurement.

*Use of the WACC and Discounting For Tax Purposes*

**WACC** is the average rate of return a company expects to compensate all its different investors. The weights are a fraction of each financing source in the company's target capital structure. The WACC does not take into consideration the relative risks associated with individual components of the business such as intangibles. Further, the WACC is generally calculated on the basis of past performance, and it does not take into account the future market factors. In practice, the WACC is generally used as the discount factor for valuation purposes by valuations teams and quite often the same is followed from a tax and transfer pricing perspective despite some of its inherent limitations. The OECD has stated that it does not intend to provide detailed guidance on valuation techniques so has not commented much on this although it recognises the issue.

In the author’s view using the WACC to calculate a value of an intangible within a business for tax or transfer pricing purposes is not intuitively correct. First of all the WACC is post–tax (see further below) and more importantly, is a measure of the riskiness of the entire business. If the intangible concerned is the sole asset of the company driving revenue the WACC may be reasonable but otherwise a more appropriate discount rate for the intangibles involved needs to be selected. This is not an easy task but it is possible to derive an implied rate for intangibles from the

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69 The general practice is to assume 1 to 2 percent for a company specific risk premium where the company risk is perceived to be similar to overall industry risk.
WACC (see below) which while also imperfect may be a better choice than the WACC.

**Implied Discount Rates for Intangibles**

In assessing discount rates it is important to think about the relative risks of various assets in the business. The WACC is an average across the business. Therefore by definition there must be assets with rates of return below the WACC and those higher than the WACC. For example, cash and working capital are typically at the low end with the higher risk assets such as many intangibles at the higher end, above the WACC.

A discount rate may be derived for the intangibles from the WACC if we can estimate rates of return for the non-intangibles and can ascertain the value of the company that can be allocated across the assets. The following example should assist:

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### The Following Information is provided:

Value Company (“VCo”) has a market value of US$30 million. Allocating this to asset values in the balance sheet (with the residual allocable to intangibles) looks like:

<table>
<thead>
<tr>
<th></th>
<th>$’000s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net working capital</td>
<td>5</td>
</tr>
<tr>
<td>Property and Fixed Assets</td>
<td>10000</td>
</tr>
<tr>
<td>Other non-current assets</td>
<td>5000</td>
</tr>
<tr>
<td>Intangibles</td>
<td>14995</td>
</tr>
<tr>
<td><strong>Market Value</strong></td>
<td><strong>30000</strong></td>
</tr>
</tbody>
</table>

Further to the above Market rates of return for the non-intangible assets are assumed to be:

- Working capital: 4%
- Property/Fixed Assets: 5%
- Other-Non-Current Assets: 6%

We want to derive a rate of return for VCo’s intangible assets-see Table b

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70 *We are in effect substituting WACC here for WARA (Weighted Average Return on Assets)*
As can be discerned from the table above, the ROR attributable to the intangibles can be derived by:

a) Allocating values to the non-intangible assets that can be valued relatively easily (A)
b) The balance of the market value of the company after deducting all allocated values) ie the 14995 is attributed to the intangibles (note this may include a bundle of intangibles including goodwill rather than a specific intangible)
c) After b) the %’s of the total value is calculated e.g in this example 49.98% of the market value is attributed to the intangibles (B)
d) We know the rates of return expected on the the non-intangibles (C) and can multiply these by the % weighting of Market Value to determine how they contribute to the overall WACC of 10% (D)
e) By working back from the 10% WACC and deducting the other asset components we derive the 7.25% of the WACC relating to the intangibles
f) In turn we derive the ROR of **14.51%** for the intangibles by dividing the 7.25% (see red text in final column above) by the % of market value attributed to intangibles i.e. 7.25/49.98%=14.51%.

However this is not the end. The 14.51% is akin to the adjusted post-tax rate to apply to the intangibles. If we therefore assume a tax rate of say, 30%, then the Pre-Tax rate would be:
Arguably and certainly in the author’s view, this is a far better measure of the Pre–Tax discount rate to apply in valuing intangibles than a basic WACC based rate. However it is obvious the science remains inexact. Firstly are the rates of return allocated to the other assets reasonable and secondly, the implied rate applies to all intangibles as a group including goodwill and not individual intangibles. For example, In-process R&D is usually going to be riskier than existing in-use technology or known brands. So the implied rate for intangibles as a group is itself an average and may need to be adjusted or tailored for specific intangibles and certainly needs to be reviewed for reasonableness against other benchmarks, if available.

**Pre or Post Tax Discount rates and Cash flows**

It is reasonably well understood that valuations for accounting purposes would generally be calculated on a post-tax basis. However debates continue as to whether valuations for Tax and Transfer Pricing purposes should be calculated on a pre-tax basis or post-tax, even between academics.

In a perfect world, there is support for the proposition that the present value should be the same whether the pre-tax cash flows are discounted at the pre-tax discount rate (as per example above) or whether the post -tax cash flows are discounted at the post-tax discount rate. However that is contested, perhaps even viewed as unrealistic, on the basis that it assumes that post-tax cash flows can be obtained by simply applying the appropriate tax rate to pre-tax cash flows. Those reservations would seem valid given various tax laws and tax incentives/deductions around the world whereby taxable income can be significantly different from the pre-tax net cash flows even pre-tax net operating income.

Another article also suggests that even if the tax rate issue is resolved the purported neutrality between pre-tax and post-tax discounting as noted above only holds true if the cash flows are even over a finite life and not where the cash flows from year to year are uneven.

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Pre-tax calculations may overvalue the transfer from the related party transferee’s perspective which may be acceptable if we are dealing with zero or minimal tax jurisdictions but not if we are dealing with higher tax jurisdictions. Perhaps one way of identifying values which are more equitable is to adopt the German Transfer of Functions Rule (See at 3.2.9 below) and value the intangible from both the transferor’s and transferee’s perspective, then take the average of the two as the arm’s length transfer value.

Unfortunately the BEPS Action 8 Discussion Draft does not seek to resolve this matter or even narrow the debate when it comes to valuing intangibles. However it does offer the following”

“(5) Assumptions regarding taxes

6.175 Where the purpose of the valuation technique is to isolate the projected cash flows associated with an intangible, it may be necessary to evaluate and quantify the effect of projected future income taxes on the projected cash flows. Tax effects to be considered include: (i) taxes projected to be imposed on future cash flows, (ii) tax amortisation benefits projected to be available to the transferee, if any, and (iii) taxes projected to be imposed on the transferor as a result of the transfer, if any.”

This is undoubtedly correct but almost understates the complexity of the topic. Perhaps the OECD could commission a project to produce some simple workable guidelines on this issue.

3.2.5 Greenfield Method of Valuation

The Greenfield method is simply another form of discounted cash flow analysis. The method basically estimates the asset value based on the discounted cash flows assuming the subject intangible is the only asset owned by the entity in a notional start up. In this regard the method effectively excludes goodwill and going concern value but builds in assumptions regarding start up costs and investments required to operate the asset.

It can be a useful model for isolating the value of particular assets and a solid approach if the business is highly dependent on assets such as licences and permits, rights based assets (e.g. water and mining) and certain franchises.

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73 OECD Guidance on Transfer Pricing Aspects of Intangibles-BEPS Action 8 2014 Deliverable-Paragraph 6.175
As with all methods, the Greenfield approach also has its challenges such as the inputs and assumptions required to develop the forecasts for the hypothetical start up can be very subjective. Of course, more fundamentally the “fiction” of a start up scenario may not represent the intangible’s present value in the relevant business.

There is a useful reference article on this topic by MPI (Management Planning Inc) Business Valuation & Advisory group.

3.2.6. Valuation of Early Stage Technologies

Early stage technology is technology that has not yet been commercialized or proven. For example, it may be ideas that are untested or it is not yet known whether or not a market exists for a technology or perhaps there are industry standards or even legislative provisions that have not yet been passed. Typical key features are that more investment (money) and time are required to prove out the viability of the technology and that translates to risk. There may be a high technology risk and there is likely to be a high level of commercial risk including competitor moves, adverse movements in the economy etc.

Earlier at 3.2.2 and 3.2.3 issues relating to the cost and market valuation approaches respectively were discussed and there is no need to repeat those here. Tax authorities in various locations have certainly accepted cost based approaches before for early stage technologies where projected financial information is simply not available or is totally “blue sky”.

However many tax authorities are generally reluctant to accept cost based approaches. Assuming some forms of projections are available, the projections should be risk adjusted or, more than likely, the discount rate should be adjusted for the risk factors. In this regard there are some studies on rates of return required by venture capitalists investing in enterprises at various stages of innovation and developing products that give an excellent perspective of the risks involved in early stage development projects. Refer to the table below.

<table>
<thead>
<tr>
<th>Stage of Development</th>
<th>Plummer\textsuperscript{74} Discount rates</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Scherlis and Sahlman(^{75}) Discount rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start-up</td>
<td>50% - 70%</td>
</tr>
<tr>
<td>Early Development (1(^{st}) Stage)</td>
<td>40% - 60%</td>
</tr>
<tr>
<td>Expansion (2(^{nd}) stage)</td>
<td>35% - 50%</td>
</tr>
<tr>
<td>IPO</td>
<td>25% - 35%</td>
</tr>
</tbody>
</table>

The studies summarised in the above table are somewhat dated now but as the author also discovered, they are still referenced in a number of much more recent articles on valuations of early stage technologies and discount rates. In reviewing rates of return or discount rates to apply in valuing prospective cash flows it is important to address the matter in the context of the industry and entities that are parties to the transaction. Early stage developments in some industries such as pharmaceuticals are typically very risky especially in the start up /ideation phase and then on through pre and early clinical trials. Discount rates in those situations would often not be out of line with the higher rates in the table above.

### 3.2.7. Real Options in Intangibles Valuation

Intangibles have real option characteristics. Most traditional valuation approaches essentially drive towards a single path and overlook the uncertainty and flexibility inherent in pursuing different paths and even overlook delaying progression until more information is available. The real options approach actually embraces these uncertainties as they occur to continually evaluate opportunities and identify and execute on options to maximise value.

Let’s take an example. Assume there is a R&D project develop a new drug. There is a high technology risk during this phase and uncertainty about the potential market for the product. Before investing further to produce the product, the company can await the outcome of the R&D project. At, or before this point, the company can also better assess the market and decide on the future direction before investing in productive capacity or exploiting the patent.

By assessing the likelihood of different outcomes and implications on cash flow, learning opportunities can be identified and decisions can be delayed until more information is available. Thus downside risk is reduced and more opportunities may present themselves.

To further the understanding, a real option is a right but not an obligation to take action relating to an asset. For example a patent is similar to a call option as it provides the right to commercialise a product or asset. However it is not obligatory to do so. Also, to go back to the example above, if the initial R&D looks positive a decision will need to be taken whether or not to take matters forward and invest more (effectively the exercise date) and that will involve accepting an estimate of the costs to do so. That is the same as exercising an option with the additional costs a proxy for the exercise price. Then, once the potential impact of the exercise is evaluated i.e. in terms of impact on cash flows, the value of the IP can be ascertained.

While real options theory offers a much more sophisticated approach and in many respects, a better approach to valuing intangibles, it is complex and it seems unlikely to be adopted by many taxpayers or tax authorities in the foreseeable future. It should be particularly useful when cash flows are impossible to forecast. For example such situations often exist in high–tech start ups and with very early R&D in the Pharmaceutical sector.

Further analysis is beyond the scope of this paper but there are a number of learned articles on the topic.\textsuperscript{76}

\textbf{3.2.8. Intangibles Pricing Determined by Game Theory}

Another approach that has received some attention, at least in TP articles if not in practice, is the application of game theory. It may well be a better solution going forward to allocate residual profit after routine functions have been rewarded especially given the increasing sophistication and cross border integrated supply chains of MNEs.

Game theory can be applied in a profit split analysis. Each entity in the “game” is treated as a player who is seeking to maximise its own profit albeit by contributing to the other players’ activities. In that sense it captures the essence of the arm’s

\textsuperscript{76} For example, See article by Vallejo-Alonso B, Areegui-Ayastuy, G, Rodriguez-Castellanos, A and Garcia-Merino, D entitled “Real Options in the Valuation of Intangibles: Managers’ Perception in The Electronic Journal of Knowledge Management II Issue 2 (pp168-182)
length principle whereby each party should be rewarded based on its contribution to the overall value.

There are some excellent articles that explain the approach far better and beyond the scope of this paper. These suggest that with the increased focus on profit split methods and the prevalence of various types of IP as key value drivers, game theory may be a better approach to use or as a tool to test the validity of other techniques.

Nevertheless like Real Options it suffers from complexity and the reality that many taxpayers and /or tax authorities will not have the expertise to apply it without expert assistance.

3.2.9. German Transfer of Function Rules (“ToF”)

An interesting approach to valuations is set out in the German ToF rules which were introduced in 2008 primarily to deal with assessing German exit (tax) charges where business restructurings took place and functions were transferred out of Germany to an overseas affiliate. These rules that are also set out in a ToF binding circular issued in October 2010, specify that if functions are transferred out of Germany then the transfer has to be valued as a package and the transferred profit potential has to be determined from both the transferor’s and the transferee’s perspectives. In effect two valuations are performed and a range of transferred values are established for both the transferor and the recipient. The median of those ranges will be the imputed transfer value for exit tax purposes if no other value within the range can be substantiated.

Lastly as an interesting aside, the German rules allow the exit value to be structured as a one-time payment or as a royalty over the lifetime of the transferred intangible.

The German rules focusing on averaging values from the transferor’s and transferee’s perspectives seems a pragmatic approach.

3.2.10. Rule of Thumb Approaches

3.2.10.1. Introduction

77 For example, see Tax Planning International Transfer Pricing Articles in October and November 2008 (BNA ISSN 1472 -0841) by Alexander Vogele, Sebastain Gonnet and Bastian Gottschling of NERA Economic Consulting –Transfer Pricing determined by Game Theory: I-Underlyings and 2-Application to IP. See also in http://www.nera.com/publications/archive/2008/transfer-prices-determined-by-game-theory-application-to-the-ba.html
Generally, most countries do not support the use of rules of thumb, at least not officially. Having said that a few countries will resort to them at least as a reasonableness check and particularly in Asia where tax authorities in countries such as Thailand, Malaysia, China and Indonesia are particularly sceptical when royalty rates exceed 3-5% of revenues.

The “25% rule” has attracted much debate, research and attention and certainly, for the more traditional industries in the past, may have had some merit. According to the rule, the royalty rate payable to the licensor should be equal to about 25% of the expected profits resulting from the usage of the intellectual property. The underlying rationale is that the profits of the products, incorporated with patented technology for example, should be shared between the licensor and licensee. The majority of the profits, 75%, were assumed allocated to the licensee on the premise that the licensee took on most of the risks and development of the product (a fact to be validated in every case). The rule focuses on operating profits, which effectively takes into account operating expenses to avoid overstating returns.

In practice, the author has also found it useful to apply such rules of thumb after the event, in order to test the results obtained from applying a more acceptable method. In such instances, it may be worth trying to rationalise any significant variations.

The 25% rule was pioneered by Robert Goldscheider\textsuperscript{78} to determine reasonable royalty rates for intellectual property licensing negotiations between third parties. The rule is basically a profit-split method of valuing IP. Goldscheider claims that it is particularly effective when the IP comprises a significant share of the product value or when the incremental benefits of the IP are otherwise difficult to measure. The validity of such claims is questionable and critics have generally illustrated a lack of empirical support for the rule. As one example, the effectiveness of the rule in the pharmaceutical industry, where the IP typically comprises a very significant share of the product value, is also generally lacking and inappropriate.

\textbf{3.2.10.2 Mechanics of the 25% rule}

In general, the 25% rule was designed to provide an initial estimate for the licensor’s share of operating profits but which needed to be adjusted based on a comprehensive analysis of the conditions of each licensing arrangement.

A tentative baseline royalty would first be set based on the parties’ expectations of their intended contributions to the product. After which, relevant information such as economic alternatives, Georgia-Pacific factors\textsuperscript{79}, and risk profiles would be taken into consideration and the tentative baseline royalty adjusted.

Richard Razgaitis outlined 6 reasons to justify the 25/75 baseline.

1. Industry norm accepted and agreed upon by numerous licensors and licensees
2. Typically 75% of the work related to development and commercialization is undertaken by the licensee
3. “He who has the gold makes the rules.” The licensee typically has greater bargaining power due to the options available.
4. 3-times payback ratio is common
5. Technology is first of the 4 required steps of commercialization
6. Ratio of R&D to profits is typically between 25 to 33 percent.

In a sense if these reasons are valid, the Rule of Thumb is an example of a Market-Based approach as discussed earlier. However these reasons were provided more than a decade ago in 2002 and it is very possible that the underlying assumptions no longer hold true in the current economy. In fact, a recent analysis of royalty rates across industries by Kemmerer and Lu shows that the reported royalty rates across industries do not converge with the rates generated by the 25% rule. Hence, the 25% rule cannot be said to be an industry norm.

In addition, Kemmerer and Lu identified technology-intensive sectors as “new economy” industries, which were not in existence when the 25% rule was proposed.

**Uniloc USA, Inc. and Uniloc Singapore Private Limited v. Microsoft Corporation**\textsuperscript{80}

In summary, Microsoft Corporation (“Microsoft”) was found to have infringed the patent of Uniloc USA, Inc. and Uniloc Singapore Private Limited (collectively, “Uniloc”). However, the Court of Appeal rejected the use of the 25% rule by Uniloc’s expert in determining a reasonable royalty rate for the purposes of awarding damages.

\textsuperscript{79} The Georgia-Pacific Corp. v. U.S. Plywood Corp. case in 1970 provided a framework within which factors of licensing negotiations could be applied in the course of litigation to determine a “reasonable royalty” under 35 U.S.C. § 284, which is the standard used to determine damages for patent infringement. (Refer to Appendix 2 for list of factors)

\textsuperscript{80} Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292, 1315 (Fed. Cir. 2011).
The Court of Appeal recognised that a) the approach does not account for the unique relationship between the patent and the product, such as the presence of close substitutes or non-infringing alternatives that would have affected the negotiation process; b) the rule also does not account for the unique relationship between the parties, represented by the different levels of risk borne by each party; and c) the rule is inherently arbitrary rule is based on ex post results.

The Court of Appeal also rejected the notion that the 25% rule is merely used as a starting point subject to adjustment pointing out that beginning from a fundamentally flawed premise would inevitably result in a fundamentally flawed conclusion.

3.2.10.3. Application of the Rule

25% Rule of Thumb vs. Classic 25% Rule

In response to the decision, Goldscheider published an article, *The Classic 25% Rule And The Art Of Intellectual Property Licensing*[^81^], to clarify the difference between the intended 25% rule methodology and the 25% rule of thumb. In essence, Goldscheider agreed with the court that, as a rule of thumb, the 25% rule is an inadequate tool for valuation. Goldscheider drew a distinction between the 25% rule of thumb and his classic 25% rule. The classic 25% rule sets the 25:75 ratio as a baseline subject to adjustments depending on the prevailing conditions unique to each individual transaction. In order to arrive at a reasonable royalty, subsequent revisions have to take into account market conditions, the *Georgia-Pacific* factors, and other relevant information. In addition, Goldscheider also noted that the initial estimate need not necessarily be 25% as prior experiences or prevailing conditions may dictate more realistic figures.

25% Rule & The Pharmaceutical Industry

In the article, “Pharmaceutical royalties in licensing deals: No place for the 25 per cent rule of thumb”, Nigel Borshell and Adrian Dawkes[^82^], who are both experienced individuals in the pharmaceutical and biotechnology sector, examined the applicability and relevance of the 25% rule in the pharmaceutical industry. They


conclude that the assumptions behind the 25% rule are unsupported and inappropriate in relation to pharmaceutical-related intellectual property.

Borshell and Dawkes first analyzed the royalty rates paid by the top 15 pharmaceutical companies with similar product profiles and cost structures. They surmised that if the 25% rule was applicable, there should be some degree of clustering of royalty rates for these companies. The analysis revealed no consistency in the royalty rates, with as much as a tenfold difference between the highest and lowest rates. However, Borshell and Dawkes also recognized that this simple study was inconclusive as it dealt with products at different stages of development.

As an alternative to the 25% rule, Borshell and Dawkes suggested a discounted cash flow method involving an estimation of future cash flows and related costs adjusted for risk. In licensing arrangements, risk is often shared between both parties and hence becomes an important driver of value. In the high risk and complex environment of pharmaceutical development, Borshell and Dawkes pointed out that the 25% rule was too simplistic to capture and account for the risk and value of licensing deals. Instead, the uniqueness of each and every licensing deal warrants a thorough analysis of risk involved to properly reflect value.

**25% rule & Trademark Valuation**

Besides the literature on the 25% rule and its applicability to patent infringement damages, MARKABLES\(^3\) also published a study that examined the 25% rule in the context of trademarks.

The study analysed 3,500 purchase price allocations (PPAs) from all over the world between 2004 and 2013 to examine the proportion of total profits attributable to trademarks. While not perfect, the PPA provides an indication of the value of different intangibles (at least for accounting purposes).

The results revealed a mean trademark profit split of 13.4%, ranging from 1.25% to 200%. The mean value of trademark profit splits was also observed to decline over time from 17% in 2004 to 10% in 2014, possibly due to shorter useful lives of trademarks in the situations studied.

The wide range of results again suggests that the 25% rule is too narrow and also overestimates the value of trademarks in most cases. Trademarks accounted for less than 10% of profits in 62% of the businesses analysed. On the other hand the study

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also showed that strong brands may account for a significant proportion of business profits. Trademarks accounted for more than 50% of the profits in 4.5% of the businesses analysed.

3.2.10.4. Knoppe Formula

Another proponent of a 25% rule of thumb was Helmut Knoppe, a lawyer specializing in German tax law, in the early 1970s. The Knoppe formula was derived from his work. Basically, the Knoppe formula estimates that the licensor should be entitled to somewhere between a quarter to one third of the expected profits, depending on the risk profile of each party.

Essentially, the Knoppe formula is the German equivalent of the 25% rule of thumb in the USA but on a similar basis, in February 2014, the local Court of Finance in Muenster, Germany, ruled that the Knoppe formula is an inappropriate approach due to its arbitrary nature. The applicant is expected to appeal the decision to the Federal Fiscal Court. It remains to be seen if the Federal Fiscal Court will address the ruling on the Knoppe formula by the Court of Finance, and provide insights to the appropriateness and applicability of the Knoppe formula in Germany.

3.2.10.5. Relevance of the Rule of Thumb and Conclusions

The US version of the 25% rule was conceived more than half a century ago when the economic landscape, industries and types of licensing deal would differ greatly from the present time. The rule is arguably even less relevant in the current economic landscape, where a much greater proportion of enterprise value is derived from intangible assets.

In fact, a study of royalty rates across industries by Kemmerer and Lu\(^84\), revealed a distinct contrast between traditional sectors and technology-intensive sectors. They concluded that the latter sector is generally able to afford higher royalty rates due to greater margins from the production of differentiated products. As such, the 25% rule would likely be a better fit for traditional industries. Nevertheless, the rule appears to provide flexibility as well as a possible starting point for hypothetical negotiations in a business setting. However it is generally not accepted for transfer pricing purposes other than as a possible sense check.

In Asia, according to a publication by Apex Asia\textsuperscript{85}, IP licensing activities have been increasing over the last several years. This is a result of Asia’s shift towards more knowledge-based economies with increasing emphasis on intangible assets as revenue drivers.

Given this trend and emphasis on intangibles, there will naturally be an increased focus on ensuring proper valuations of the intangibles in licensing agreements. However based on the criticisms and concerns against the 25% rule, it is unlikely that it will be a suitable or common methodology Asia.

3.2.11 Some Conclusions Re Valuations

As may be noted from this section the issues around valuations are complex and varied. Yet given the absence of market comparables for many intangibles it is extremely important not only in the context of outright transfers of intangibles between related parties but also because the valuation should inform the identification of the appropriate royalty rate in licensing scenarios where suitable comparables are simply not available.

It should also be evident that the complexities make this area ripe for cross-territory disputes and double taxation. In Asian countries this is compounded by the general view that payments for intangibles (typically to Western countries) are eroding Asian country tax bases. While at present royalty flows are predominantly from Asia to the west, intra-Asian disputes are likely to increase significantly in future years. As such, simple uniform guidelines agreed between the OECD, UN, Asean or other such forums would be most welcome. The answers need not be perfect theoretical models but models that are fair and simple for all to follow.

4. TRANSFER PRICING METHODOLOGIES FOR INTANGIBLES

4.1. Introduction

Whilst section 4.2 of this paper covers the use of commercial databases, it is also very important to consider and select the most appropriate transfer pricing methodology. The selection of the most appropriate transfer pricing method should be based on a solid functional analysis that provides a clear understanding of the multinational group’s global business processes as well as the business and functions performed by the transferor company. The analysis also needs to address

how the intangibles deployed by the MNE group interact with other functions, assets and risks that comprise the global and local business. Based on the OECD BEPS deliverable, the transfer pricing methods most likely to prove useful in matters involving transfers of one or more intangibles are the CUP method, the Transactional Net Margin Method (TNMM) /Comparable Profit Method (CPM) or profit split methods. Valuation techniques can also be useful tools especially as there are often few if any comparables. An example of one valuation technique is the income-based method discussed in detail in Section 3.

The TNMM/CPM methods, like the other more traditional pricing methodologies are really “one-sided” methods which seek to price an appropriate return to one of the parties to a controlled transaction without regard to the results of the other party which in effect renders up the balance of the system profit to that other party once the TNMM based return to the first party has been deducted. Historically this has been a reasonably effective approach in practice where typically one party has owned and controlled the intangibles in question and may indeed have had the lion’s share of the bargaining power. However the validity of this approach in today’s world, where independent parties often bring their respective differentiators and own intangibles to a commercial arrangement, is coming under more scrutiny. This is discussed a little more in 4.2 below.

Profit split requires the combined profit from the controlled transactions to be divided between the companies concerned based on the relative value of the contributions each party makes. This inevitably involves an understanding of the functions, risks and assets assumed or contributed by each party but also has a qualitative aspect to it. Ideally the analysis can also access external market data as much as possible to provide some perspective on how independent enterprises may have divided the profits in the same circumstances.

There are essentially two types of Profit split methods; the Overall Profit Split (OPS) and the Residual Profit Split (RPSM).

Under the OPS, the combined profits are split between the entities on an economically valid basis as close as possible to what might have been the split between independent parties based on the factors noted above i.e. functions, risks, assets and value added. Of course that simple statement hides the complexity of actually doing that in practice. Obviously it can be very difficult to determine the relative value of contributions made.

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86 OECD Guidance on Transfer Pricing Aspects of Intangibles-BEPS Action 8 2014 Deliverable- Paragraph 6.130
87 Ibid Paragraph 6.142
Under the RPSM method “routine function” are first distinguished from non-routine/high value/entrepreneurial functions. Arm’s length returns are then allocated to those routine functions and the remaining residual profits are split between the parties much as described under the OPS; namely based on appropriate allocation factors.

There are a number of approaches used for estimating the spit of profits whether OPS or RPS, many using various types of contribution analysis. Briefly some of the possible methods include:

- **Capital Investment Method**

  This approach estimates the value of intangible contributions by reference to the capitalised cost of developing and updating the intangibles less an amortisation factor based on the useful life of the intangibles. This approach assumes that the intangibles in question are well defined and that the investment adequately reflects the contribution of the parties.

- **Compensation Method**

  This is quite different from the Capital investment method in that it uses labour costs incurred by each party. These costs would include salaries, benefits and bonuses. While this approach would appear to fit in well with the increased emphasis on people functions, these may not all be value drivers.

- **Bargaining Theory Approach**

  This is a complex approach and has not really been seen in practice at least not in the author’s experience and not in Asia. It does rely on Game Theory that was discussed in Section 3.

- **Other Approaches**

  Many of the other approaches rely on surveys and interviews with key executives and subject matter experts to obtain their views on the value drivers and even the appropriate split of profits. Care has to be exercised with such processes and the numbers interviewed or surveyed have to be sufficient to cater for the inevitable bias in individual responses. For example in the author’s experience if a technologist is interviewed, technology will almost always come to the fore as a big value driver, a marketing manager will typically focus on customer relationships, branding and promotions asy and
senior management will focus on strategy. So questionnaires have to be carefully designed.

Approaches will also include weighting techniques whereby different weights are assigned to relevant factors. For example this may even include the seniority of staff involved in handling important functions and risks managed during a particular process.

**4.2.0. Comparables for Intangibles and Profit Splits**

**4.2.1. Introduction**

This section will assess the usefulness of databases in identifying comparables given the uniqueness of many intangibles and in particular, difficulties identifying similar profit potential intangibles.

We will also examine when a profit split methodology may be appropriate in assessing transfer prices.

The OECD recommends that the identification and use of any internal comparables\(^88\) should be the logical first step\(^89\) in reviewing or determining the arm’s length nature of the controlled transactions, including transactions relating to intangibles. This is because internal comparables usually have a closer and direct relationship with the transactions under review than external comparables. The financial analysis may also be easier and more reliable as it will presumably rely on identical accounting standards and practices for both the internal comparable and for the controlled transaction(s). In addition, access to information on internal comparables should be more complete and less costly to obtain\(^90\).

However, internal comparables also need to conform to the comparability factors as described in paragraphs 1.38 to 1.63 of the OECD Guidelines similar to external comparables. In reality, it is not easy to find internal comparable transactions involving intangibles as such transactions with third parties are not often seen within MNEs.

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\(^88\) Internal comparables are comparable transaction(s) between one party to the controlled transaction and an independent party whereas external comparables are comparable transaction(s) between two independent parties, neither of which is a party to the controlled transaction.

\(^89\) 2010 OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations-Paragraph 3.4

\(^90\) Ibid-Paragraph 3.27
In many situations, reliance has to be placed on external comparables that can be found in publicly available domains. Such sources for external comparables are commercial databases. These are typically developed by editors who compile data from accounts filed by companies with the relevant administrative or regulatory bodies. The data is then presented in electronic format suitable for searches and statistical analysis. These databases can be a practical and cost-effective way of identifying external comparables. Whether the data offers good comparables or not depends very much on the facts and circumstances of the case.\(^91\)

External databases come with their own limitations as discussed in the OECD Guidelines, e.g., limited availability of information for a number of countries, different data / information and formats provided in different countries, lack of adequate details, etc.\(^92\) These limitations are exacerbated for transactions involving intangibles. As noted earlier, the OECD has undertaken a significant amount of work to provide guidance to the business community as well as to tax administrations on intangibles both prior to the BEPS project and as summarised in the Action 8 deliverables of the BEPS project.

This Action 8 deliverable released in September 2014 states that the guidance provided in Chapters I to III of the OECD Guidelines should be used for transactions involving intangibles.\(^93\) Having said that, the subsequent paragraph in the same deliverable also acknowledges that the application of Chapters I to III of the OECD Guidelines can be difficult in relation to intangible transactions i.e. “Intangibles may have special characteristics that complicate the search for comparables, and in some cases make pricing difficult to determine at the time of the transaction.”\(^94\)

### 4.2.2. Usefulness of External Databases for Intangible Comparables

The September 14 Action 8 deliverables also provided further supplemental guidance in relation to the following three categories of transactions involving intangibles:

- Transactions involving the transfer of intangibles or rights in intangibles
- Transactions involving the transfer of intangibles or rights in intangibles whose value is highly uncertain at the time of the transfer

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\(^91\) Ibid-Paragraph 3.30  
\(^92\) Ibid-Paragraphs 3.31 to 3.34  
\(^93\) OECD Guidance on Transfer Pricing Aspects of Intangibles-BEPS Action 8 2014 Deliverable-Paragraph 6.104  
\(^94\) Ibid-Paragraph 6.105
Transactions involving the use of intangibles in the sale of goods or provision of services.

In the rest of this section, we will consider the usefulness of external databases for finding comparables for the above three categories of transactions, any limitations in relation to the same as well as the potential use of profit split methodologies, where applicable.

Background to the databases

Firstly, it may be helpful to provide a brief background on the types of commercial databases that are available and which might be used for intangibles transactions. A third party vendor database named RoyaltyStat® is used by a number of taxpayers and tax consultants in analysing certain intangibles transactions especially licensing. This is a database of royalty rates and license agreements compiled from the US Security and Exchange Commission (SEC) filings and available in the US Electronic Data Gathering, Analysis and Retrieval system (EDGAR) archive. It contains more than 10,000 licensing agreements and is updated every working day.

The RoyaltyStat database provides licensing agreements that are categorised by industry (e.g., oil and gas, medical devices, etc) as well as agreement types (e.g., software, sublicense, etc). In addition, the database provides information on the effective date of the agreement, royalty base and royalty rate as well as the territory to which the agreement applies.

Another third party database is Nexis. It provides content-enabled workflow solutions designed for undertaking benchmarking analyses for the licensing of intangible assets (i.e., to determine royalty rates for the licensing of intangible assets).

For the European region, depending on the availability of data or depending on the preference of taxpayers / tax authorities, a database called RoyaltyRange is available which consists of information from publicly available sources, including SEC, SEDAR, international court databases, stock exchanges, etc.

Some advisory firms have also developed their own proprietary databases which would contain the underlying agreements from the SEC as well as certain additional resources such as Nexis, etc.

The agreements or information from relevant agreements as captured in these databases are used for comparability analysis with the intangible licensing transactions in question. Depending on the nature of the transactions, searches are usually undertaken on one or more of the aforesaid databases to find similar
agreements in similar industries. If agreements in similar industries are not available, then lateral searches for similar type of agreements in different industries can be undertaken.

Perhaps one interesting point to note from practical experience is that generally, geographic parameters are not strictly observed (unlike other transactions) and a global sample set is often used to determine the royalty rates. While this is not always appropriate by any means, as a matter of practice, it has generally been accepted by tax authorities in most jurisdictions although perhaps less so in certain Asian countries. The reality is that in many developing countries in Asia it is difficult to find extensive publicly available comparables data outside of Japan and South Korea (and those jurisdictions have their own peculiarities).

**Usefulness of the databases in relation to the three transactions relating to the intangibles mentioned above**

- **Transactions involving the transfer of intangibles or rights in intangibles**

The OECD Action 8 deliverables cover the sale of intangibles as well as transactions that are economically equivalent to sales.

The OECD acknowledges that intangibles often have unique characteristics, and as a result have the potential for generating returns and creating future benefits that could differ widely. One of the key things to critically assess is whether the potential comparables in fact exhibit similar profit potential as the transferred intangible.

Whilst there are many features of intangibles that need to be considered in the comparability analysis, the OECD has helpfully provided a non-exhaustive list of some of these features. The list include factors such as exclusivity, extent and duration of legal protection, geographic scope, useful life, stage of development, rights to enhancements, revisions and updates, expectation of future benefit and of course the various risks associated with the intangibles. Appropriate adjustments need to be made to ensure that differences between the transactions do not impact the comparability of the two transactions significantly. It is always important to assess whether publicly available data drawn from commercial databases and proprietary compilations is sufficiently detailed to permit a proper evaluation of the specific features of intangibles in conducting a comparability analysis.

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95 *OECD Guidance on Transfer Pricing Aspects of Intangibles-BEPS Action 8 2014 Deliverable-Paragraph 6.113*

96 *Ibid-Paragraph 6.127*
As previously stated, it is often very difficult to find publicly available comparable uncontrolled data (i.e., using the CUP method) for the outright sale of intangibles that would meet all the comparability factors. In most scenarios, intangibles have unique parameters that would define their value in any sale transaction. In most uncontrolled transactions, there is no single valuation methodology used to determine the pricing for the sale of the intangibles. There would be a lot of assumptions, financial projections (where applicable) or other cost information (where applicable) that would have been utilised to arrive at the agreed price of the intangible but this data would not typically be publicly available. Further, the economic circumstances behind the transaction, for example, the bargaining power of the two unrelated companies will also not be available in the public domain making it difficult to rely on the limited data for any comparability analysis. These limitations point to other methodologies such as the valuation techniques discussed earlier in Section 3 and profit split methodologies.

The OECD deliverable provides guidance on the use of profit split methods and mentions that such methods may have application with the sale of full rights in intangibles. Exact guidance on how the profit split might be applied or implemented is not provided in this section. In practice, instances of profit split being used to ascertain the value of a transferred intangible between related parties probably remain few in number. The author has some experience of profit split methodologies being applied in such an instance in a Western jurisdiction but not in Asia to date.

In terms of licensing of the intangibles by one company of a multinational group to another, taxpayers have often used the CUP method to support the arm’s length nature of the transaction. There is perhaps something inherently illogical about that as the above discussion on the limitations of databases for a sale of intangibles might suggest. After all, the sale or license of an intangible should derive from the same or similar economic variables. However unrelated parties may well approach licensing transactions with a somewhat shorter term mind-set than a sale or acquisition and it is true that royalty databases for licensing transactions have more complete information available for taxpayers to use than a controlled transaction involving the sale of intangibles.

While databases with royalty rates may provide information on the type of intangibles, the length of the license period, the geographic coverage, the royalty rate and the base on which royalty is calculated, etc., there are important limitations to keep in mind such as the functional analysis of both parties to the licensing arrangement and details on the bargaining power of the parties concerned. However, assuming that a sufficient number of potentially comparable agreements can be carefully selected from the databases to come up with a solid inter-quartile range, one could argue that it should provide a reasonable indication of the arm’s
length range of prices that might be charged between two companies of a multinational group.

In licensing scenarios, the OECD deliverable on BEPS Action 8 also recognises that in absence of a reliable CUP, the profit split method can often be utilised to evaluate the respective contributions of the parties to earning the combined income\textsuperscript{97}.

Traditionally, a profit split method was considered to be applicable if both the parties to the transactions had valuable intangibles or if the operations of the parties were highly integrated. However, there now seems to be a strong inference in the OECD drafts that a profit split analysis may be preferred in many other scenarios depending on the relevant contribution of the functions and risks undertaken by parties to the transactions. This would seem logical given the more pronounced focus on people functions and value creation but applying profit split can be complex and will likely give rise to more disputes between taxpayers and authorities and between countries. Whether the OECD is seeking to give a signal that the use of a profit split methodology is a desirable methodology in almost all transactions unless there is a robust internal or external CUP remains to be seen. Certainly the underlying assumption seems to be that people functions and risks are the all important value drivers in the business.

In the author’s experience, even if an apparent CUP looks appropriate and is used it can be a useful exercise for taxpayers to test the overall result with some form of profit split methodology to corroborate the position or perhaps only to anticipate similar approaches from the relevant tax authorities. Then taxpayers and advisers can determine what looks commercially sensible. This may well be a rudimentary exercise but its importance cannot be understated in the post BEPS environment.

- **Transactions involving the transfer of intangibles or rights in intangibles whose value is highly uncertain at the time of the transfer**

In the BEPS deliverable of September 2014, the OECD mentioned that there was a considerable amount of work yet to be undertaken in this area and that the current guidance provided in the OECD Guidelines 2010 version may be subject to change. The OECD then released its draft on hard to value intangibles on 4 June 2015. For the purpose of the commentary below, we have relied upon the 2010 version of the Guidelines and the draft release of 4 June to provide a brief synopsis.

When a valuation of intangible property at the time of the transaction is highly

\textsuperscript{97}OECD Guidance on Transfer Pricing Aspects of Intangibles-BEPS Action 8 2014 Deliverable - Paragraph 6.149
uncertain\textsuperscript{98}, clearly the question arises as to how the arm’s length price should be determined. The question should be resolved both by taxpayers and tax administrations, by reference to what independent enterprises would have done in comparable circumstances to take account of the uncertainty in the pricing of the transaction\textsuperscript{99}.

In the draft guidelines on hard to value intangibles issued by the OECD on 4 June, some of the examples suggested include a shorter-term agreement, including price adjustment clauses in the terms of the agreement, or adopting a payment structure involving periodic milestones to protect against future developments that might not be predictable. Other examples include additional contingent amounts on the achievement of specified milestone stages, etc.

While the above are reasonable suggestions, one needs to consider the practicality of applying or recharacterising the same in any particular business scenario. In any particular industry, reference should surely be made to industry practices as a first step before the relevant tax authorities seek to impose such conditions. In the absence of evidence of similar conditions existing in dealings between third parties, the tax authorities should not automatically default to their use, particularly on a hindsight basis.

As mentioned in the previous paragraphs, intangibles have a special character that may make it difficult to find comparables. This difficulty is compounded for intangibles whose value is highly uncertain at the time of the transaction (e.g. early stage technology). In such a scenario the taxpayers may turn to rely on some of the valuation techniques discussed at Section 3 above to determine the arm’s length price for the transaction value.

The hard to value intangibles discussion draft released on 4 June also indicated that the tax authorities can look to ex-post data and propose an adjustment unless the taxpayer can satisfactorily demonstrate that the ex post data is different from the original ex ante data, due to unforeseeable events. Whilst this proposal remains subject to finalization, if implemented in its current form, it could lead to significant uncertainty and unpredictability regarding the pricing of intangibles and is almost another form of a US style commensurate-with-income provision.

\textsuperscript{98} For example see "Valuation of Early Stage Technologies" at 3.2.6.  
\textsuperscript{99} OECD Guidance on Transfer Pricing Aspects of Intangibles-BEPS Action 8 2014 Deliverable - Paragraph 6.178
• **Transactions involving the use of intangibles in the sale of goods or provision of services.**

The general rules of the 2010 OECD guidelines paragraphs 1.33 to 1.63, (i.e., comparability of the relevant economic characteristics, due consideration of options realistically available to parties to the transaction, making adjustments for any material differences between the controlled transaction and the comparable transaction) and Chapter III, (i.e., more specific guidance on comparability analysis) of the OECD Guidelines also apply in a comparability analysis of controlled transactions involving the sale of goods or the provision of services with embedded intangibles or intangibles used in the sale or service. However, the presence of the intangibles often raises challenging comparability issues\(^{100}\).

In cases where reliable comparables are not available or if there are unique and valuable intangibles involved even on the (least complex) tested party side, the OECD recommends that a transactional profit split analysis may be appropriate. However, the OECD also mentions that care should be taken to identify the intangibles in question, to evaluate the manner in which those intangibles contribute to the creation of value, and to evaluate the income producing functions performed, risks and assets.

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**Case study**

\(^{100}\) *OECD Guidance on Transfer Pricing Aspects of Intangibles-BEPS Action 8 2014 Deliverable - Paragraph 6.187*
The following case study should help illustrate some of the key points mentioned in the above commentary. Please note that this case study is based on certain assumptions and based on the author’s experience of dealing with similar case

COMPANY ABC and SUBSIDIARIES

Country A HQ

License of IP

Country B – RHQ

License of Franchise package (IP and strategic services)

Country C – Local OpCo

Payment of fixed % royalty or profit split?

Residual Profit or Residual Profit Split?
• Group ABC is headquartered in Country A (Company A is parent) and has legal ownership of intangibles relevant to the business of ABC Group (the IP was either originally developed or bought by Company A).

• Company A conducts functions such as planning and overseeing the development of the core elements of the intangibles, managing risk relating thereto and managing the legal protection for the intangibles.

• The Asian regional rights for the intangibles are licensed to Country B (Company B) that acts as the Asian regional headquarters for the group. Company B adapts and tailors the intangibles further for operations within Asia and Country B management take all decisions relating to their exploitation and use by the group’s operating companies in the region e.g. Company C in Country C.

• Company B pays a fixed percentage royalty to Country A for the licensed intangibles.

• Company B exploits its rights in the intangibles coupled with strategic services provided by its specialists and experienced management by providing the “package” to Company C, one of its operating affiliates in Country C.

• The package that is provided to Company C by Company B can be characterised as similar to a franchise arrangement between Country B and Country C.

• Country C is involved in the manufacture and sale of the products in Country C and also has certain local intangibles i.e. local marketing intangibles.

Points to consider

Keeping the above facts in mind along with the preceding commentary, some of the key considerations may be summarised as follows:

• Substance in Country A – HQ – Mere legal ownership without substance will be scrutinised quite closely by the tax authorities. In order for Company A to enjoy a return beyond that which might be attributed to a financier or an entity holding bare title, Company A should have appropriate substance to prove the legal and
economic ownership of the intangibles. These include, inter alia, relevant functions to ensure legal protection of the intangible, on-going development of the intangible, capacity to absorb risks in relation to the intangibles and relevant people functions to manage the on-going development work and manage risks, etc.

• Fixed returns vs variable (super) returns– Mere legal ownership of the intangibles does not warrant the allocation of super profits to the legal owner of the intangible. However, in the fact pattern provided Company A does handle some important functions and manages core development risk but not regional refinements or regional business aspects. In this case, it might seem that Company A should be provided with a market comparable royalty rate, generally calculated as a percentage of sales. Alternatively, the relative value of the initial R&D and on-going development work may well deserve a larger share of the overall profits.

• Comparables / benchmarking for determining the royalty payable by Company B to Company A – Given that this could be considered a fairly standard licensing operation by Company A, an external comparability analysis using one of the databases (described earlier in the commentary) could be performed to determine the rate of royalty to be charged by Company A (unless an internal comparable transaction is available).

• Pricing of the “packaged” transaction from Company B to Company C – For this transaction, it is noted that the arrangement is similar to a franchise arrangement and hence, a benchmarking accessing similar franchise arrangements could be considered in this case. However, this may not be the correct answer for the following two reasons (i) this assumes that the intangibles and strategic management in country B are not necessarily the key value drivers that deserve a higher share of the overall profits. On the contrary, it may imply that the operations in Country C are considered key value drivers in the business and hence deserve any residual/super profits and (ii) the possible lack of available comparable benchmarks for a “franchise fee” due to the limitations of the database.

One may also consider that there are two components provided by Company B to Company C (i.e., the intangibles and the strategic management services). Hence, keeping in view the transactional approach to benchmarking, both of these aspects
could be separately benchmarked. Again, whilst technically such a position can be argued, it may not be the right answer for the following reasons (i) this assumes that the intangibles and services are not interlinked and one does not enhance the benefit of the other whereas the opposite may be closer to the truth; and (ii) this may assume that most of the value drivers in the business are in Country C and hence, that Company C deserves the lion’s share of the variable / super profits.

Given that both countries have intangibles (with Country C having the marketing intangibles), one could also argue that a residual profit split method is the most appropriate transfer pricing method to price the transaction between Company B and C. For example, Company C might be provided with a routine return for its manufacturing and distribution activities and the remaining profits could be split between Company B and C depending on the relative importance and contribution of their intangibles. Alternatively, a routine return to Country C for its manufacturing may be appropriate and instead of splitting the residual profit, an acceptable return for the local marketing intangible using external benchmarking analysis may be appropriate. Whilst the local marketing intangibles are important, they are not the key value driver in the business.

**Profit Split Methods**

In the absence of Comparable Uncontrolled Prices (CUPs) or Comparable Uncontrolled Transactions, other methods need

**Conclusion**

As can be observed from this brief case study above, the analysis of transfer pricing aspects relating to intangibles can be quite subjective and the specific fact patterns need to be thoroughly analysed before any conclusion can be reached.

**SECTION 5- REVIEW AND COMPARISON OF COUNTRY TAX LAWS AND PRACTICES**

**5.1.0. Introduction**

This section seeks to provide a brief outline of some of the main tax issues relating to the development and exploitation of intangibles in the Asia Pacific region as well as comparing approaches with a number of Western regimes where Tax authorities generally have more experience with the issues and their tax laws more developed. The outlines provided in the paragraphs below are based on observations and responses from a questionnaire addressed to PwC Tax Professionals in the countries
chosen both in Asia and in Western countries.

Summaries of the country responses to the questionnaire and how the various relevant issues are handled in each of the countries covered are set out in Appendices 3 and 4. Appendix 3 covers Asia Pacific countries namely, Singapore, China, Hong Kong, Indonesia, India, Japan, Malaysia and Thailand. Appendix 4 covers the same issues for Germany, Ireland, Luxembourg, Netherlands, Switzerland, United Kingdom and the USA. It should be noted that the comments made are generally based upon practices observed in the application of the tax law in the countries concerned up to and as at June 15, 2015. While every care has been taken with the responses, they should not be regarded as a researched technical answer to the issue and should not be relied upon as such or as a substitute for definitive advice on an issue. Clearly the responses are given in general terms without the context of specific fact patterns.

Nevertheless thanks are due to the contributors in the various country PwC offices for their time and effort in providing the insights recorded. A full list of these offices and the individual contributors is provided in the foreword.

5.1.1. Outright sale or acquisition of IP between related parties

For transfers of intellectual property ("IP") between related parties, taxpayers are expected to observe the arm's length principle in determining the appropriate transfer value. This expectation is consistent across all the Asian and Western regimes covered. In some of the jurisdictions any gains on the disposal/transfer of IP may not be taxed due to the characterisation of the gain as being on capital account (e.g., Singapore, Malaysia and Hong Kong). Other Asian regimes and most of the Western regimes tax the gains, typically at standard corporate rates but there are some countries where the tax rate may differ due to characterization of the gain or the nature of the IP. (IP Box regimes are ignored for this purpose but see Section 6).

With regard to the acquisition of IP and the tax deductions that may be available, almost all the Western countries surveyed allow the acquisition costs to be amortised in some manner for tax purposes, many following the accounting amortization. Many Asian countries also allow deductions but are often more prescriptive. For example, Singapore offers its Section 19B deduction which is basically a 5 year write off; in China and India the position will depend on the type of IP and in other countries including China and Thailand the normal amortization will usually be over 10 years or 10% per annum. Oddly the position in Asia seems much more uncertain with regard to “Buy-in” payments under Cost Sharing arrangements which are discussed further below. One could be forgiven for thinking that the answer should be the same in principle between the outright acquisition of an intangible or buying a share in the same intangible.
5.2.2. Valuation of IP in transfers between related parties

Valuation approaches have been discussed earlier in this paper and will not be discussed further here save for some references when comparing approaches in the countries surveyed.

In certain Asian countries such as China and Indonesia, a third party valuation report is required to be submitted to substantiate the arm's length basis of the transfer price.

Most of the other countries surveyed do not prescribe guidelines on valuation approaches from a transfer pricing perspective. However, most authorities generally accept the internationally accepted valuation approaches such as the cost-based, income-based or market-based approaches where the most appropriate method will have to be considered based on the specific fact pattern being evaluated. However, across the territories surveyed, there is undoubtedly an increased emphasis on taxpayers being able to demonstrate the arm's length nature of the consideration passing on a transfer/outright sale or acquisition of intangibles. As transfer pricing is an art and not a science, many taxpayers face practical challenges under audit in supporting the critical assumptions used in valuation studies. For instance, it is well known that valuation approaches are commonly subject to intense discussion in China (e.g. consider the valuation issues and tax issues around the transfer of shares in China).

Perhaps not surprisingly, the Chinese authorities have gained more experience in dealing with valuation approaches than some of the other Asian countries (and more sophisticated valuation methods such as the Multiple Period Excess Earnings Method have also been considered there-see previously at 3.2.4.8.). Naturally, differences in experience and expectations are also evident across different local tax authorities.

We note that most countries surveyed accept (and in many cases prefer, the use of income-based approaches, the mostly widely applied method being the discounted cash flow method. Further, while market-based approaches are in theory favoured, these are not commonly applied due to the lack of meaningful comparables. This is particularly the case in Asia. Similarly, cost-based approaches may in principle be suitable for valuing routine intangibles or early stage IP (refer 3.2.6.) where income potential is impossible to predict. Cost based approaches are usually only justified based on the assumption that one would pay no more for an asset than the cost to purchase or construct an asset with the same or similar utility. Cost based valuations (especially the replacement cost method) are more likely to be accepted for certain
internal software, websites, databases or possibly business relationships. Otherwise cost-based approaches are typically not preferred by tax authorities and are commonly subject to challenge.

5.2.3. Royalties

In all territories surveyed, intercompany royalty payments are strictly subject to the arm's length principle. To date, there has been no safe harbor threshold rates established for royalty payments. All countries expect to see the rate validated and supported by a Transfer Pricing report and as appropriate, royalty benchmarking. However, in a number of countries (e.g., Malaysia, Indonesia and China), it has also been observed that the attention of tax authorities tends to be triggered when the royalty payments exceed certain thresholds (e.g. above 3-5% in China; greater than 3% in Thailand and greater than 5% in Malaysia). It is probably fair to say that other tax authorities exhibit the same attention in other territories where the royalties exceed similar amounts but perhaps a little less evident. Regrettably, in the author’s experience, there are also some cases in certain Asian countries where tax officials have even been known to decline to review a taxpayer’s transfer pricing report and instead come up with their own perceived rates regardless of the efforts expended by taxpayers to prove out their position. While the BEPS initiative and CbCR seek to address artificial profit shifting, it is to be hoped that these rather one-sided practices are also eliminated.

The use of so-called “rules of thumb” in reviewing royalty rates are officially frowned upon although they may be used as a reasonableness check by tax officials e.g. even in Western countries such as Germany. The author also believes that it is sometimes helpful to review the reasonableness of the proportion of total system profit from relevant transactions that accrues to the royalty recipient.

Variable royalties have been more common in Asia in recent years. This is usually a situation whereby the royalties fluctuate from year to year in order to leave the appropriate level of profits in the licensee jurisdiction based on the functions, assets and risks undertaken by the licensee versus the licensor. If the licensor is undertaking more of the relevant functions and risks the licensor’s functions are more routine this would seem to make economic sense and indeed in line with the BEPS principles. However it should be of no surprise to note that such arrangements are often greeted with some scepticism by tax authorities and requires persuasive evidence and support by taxpayers to prove out their position. The use of variable royalties across Asia is not common in countries such as India and Indonesia but structures have been agreed elsewhere in Asia often through a unilateral or bilateral APA process. In fact the adoption of a variable royalty structure would generally be
ill advised without advance agreement with the relevant tax authorities.

The same comments also apply to the Western countries surveyed. The use of variable royalties is certainly more common in some of these countries although differences in acceptability and experience of different tax authorities also exist across these nations. For example, variable royalty licences into Germany, the UK or the USA are not that common.

5.2.4. Declining royalties

There are situations where structures are seen where the royalty rate declines with time. For example, these situations can occur where the licensee party enters into an agreement with the related party licensor with the intention of using the existing IP to develop new IP. So instead of acquiring the old IP outright, the party seeking to develop the new IP would license in the old IP in from the transferor over a period of time, basing the royalty paid to the transferor on the market value. At the beginning of the license the royalty would typically have a higher value but as new IP replaces this old IP the value of the old IP and thus the royalties might be expected to decline.

It is also true that the old IP owner may simply want to avoid any immediate, up-front cash tax cost on a sale of its IP, preferring instead to receive an annual royalty income stream over a number of years.

Again such pricing structures are reasonably sophisticated and are unlike traditional licences. Accordingly they often attract the attention of the tax authorities where they are in place between related parties. Nevertheless they are usually perfectly valid economically. For example, assume a China based subsidiary needs access to technology owned by the parent but after a short time takes on more and more of the modifications and on-going R&D related to that technology. In a third party situation one would expect that over time the value of the parent’s technology would decline as China’s contribution increases, albeit perhaps never to zero but to minimal levels. Thus the royalty payable by China might also be expected to decline leaving more of the system profit with China. The difficult aspect is justifying the rate of decline and royalty rate and relating this to the useful life of the technology.

The question sometimes arises whether a declining royalty structure could or should be recharacterised as an outright sale of IP rather than a license. While such a determination would be very fact specific, to determine the appropriate characterisation as a sale or as a license one would need to examine the legal and economic rights and obligations of the parties involved. Such a recharacterisation has not been commonly observed in the countries surveyed. However, if the license
was perpetual or long term with no provisions in the agreement for termination, review or renegotiation, one could understand that recharacterisation as a sale might be risk.

5.2.5. Cost sharing agreements (CSAs) and Cost Contribution Arrangements (CCAs)

In simple terms CSAs and CCAs are contractual arrangements between business enterprises to share contributions and risks involved in the joint development of intangibles or services for the benefit of participants. CSAs are essentially the American equivalent of CCAs except that US tax law contains very prescriptive rules for those involved in CSAs. CCAs on the other hand are the OECD equivalent of CSAs and while there are some important specifics in the USA rules that are different, the principles are much the same.

In this analysis the focus is on CCAs/CSAs for the development of intangibles rather than services.

CCAs/CSAs are not common across the Asian jurisdictions surveyed save for Japan where historically, a number of CSAs have been entered into with USA counterparts. In comparison, CCAs/CSAs are more commonly used among the more developed Western nations in particular, the USA, but are also common in Germany, Ireland and Switzerland. In Luxembourg, Netherlands and the UK they are also utilized but a little less so.

Correspondingly, there tends to be more clarity around the tax treatment of CCA/CSA payments (e.g., buy-in payments vs. ongoing contributions) in Western jurisdictions. In many of the Western nations surveyed, the tax treatment of payments tends to follow the accounting treatment. Consideration of the accounting position requires determining the purpose for which payments are made. For instance, are the payments “buy-in” payments to enter into existing agreements and acquire rights in existing intangibles or ongoing contributions to fund new development? The answers would then form the basis for the characterisation of the payments. Buy in payments in Western jurisdictions would usually be capitalized in the accounts and amortised for both accounting and tax purposes.

Conversely, in Asia, most countries do not have specific guidance on the tax and transfer pricing treatment of CSAs/CCAs and hence the tax treatment of payments under these arrangements tends to be significantly less clear. Japan is a notable exception in Asia, presumably because it has experienced a number of cost sharing arrangements with USA companies over the years. What is clear is that in both
Asian and non-Asian jurisdictions, CCAs/CSAs are becoming subject to increasing TP documentation requirements (e.g., agreements, transfer pricing analyses etc.).

It should perhaps be noted that despite the fact that USA regulations on cost sharing have been around for some time, there are still ongoing debates on certain aspects. In the recent US Tax Court case *Altera Corp. v. Commissioner*, T.C. Dkt Nos. 6253-12, 9963-12, the IRS asserted that unrelated party comparable data is irrelevant in determining whether parties to a cost sharing agreement must include stock-based compensation in the costs to be shared.

In *Xilinx v. Commissioner*, 598 F.3d 1191 (9th Cir. 2010), the IRS made the same argument and lost. As a result of the *Xilinx* case, the IRS revised Treas. Reg. § 1.482-7(d)(2) in 2003 to specifically require the cost sharing of stock-based compensation. The validity of that regulation was the issue in the recent *Altera* case. The court held that the regulation was not based on the arm’s length principle and as such was not valid under the statutory procedures for issuing such regulations. This decision, if it stands, will be critical to many USA MNCs although the IRS may yet choose to appeal it.

Moving forward, in the author’s view Asian territories aspiring to encourage IP ownership and development activities should address their tax rules relating to cost sharing. In today’s world where partnerships, alliances and networks have become important for any enterprise expanding overseas, the likelihood of greater sharing and joint development of technology and know how will increase. Asian countries need access to emerging technologies, so having clearer guidance on the tax treatment of CCAs/CSAs would be an extremely positive development. Both CCAs/CSAs between related parties or unrelated parties would stand to benefit. Singapore is arguably, the best positioned to drive this agenda in the Asian region or at least across Asean.

Having stressed the need for greater clarity of tax treatment for CCAs/CSAs in Asian countries, there are a few global issues to address relating to the BEPS initiatives on intangibles.

Under BEPS Action 8, the OECD issued a Discussion Draft dated 29th April 2015 on Revisions to Chapter VIII of the Transfer Pricing Guidelines on Cost Contribution Arrangements (CCAs). A number of submissions were made to the OECD in May regarding this draft. Two major concerns voiced were as follows:

a) The discussion draft proposed guidance to determine “bona fide” participants to the CCA including a requirement that “a CCA participant should have the capability to make decisions to take on the risk bearing opportunity, to make decisions on how to respond to the risks, and to assess, monitor and
direct……”\textsuperscript{101} The author does not see the need or understand the desire for this provision. Independent parties often accept risks that they cannot manage or control perhaps delegating those tasks completely or living with the risks but seeking an adequate return accordingly. Also having two or more parties managing and controlling risk in a cost-sharing model, would seem wasteful, costly and unnecessary. In reality, that role might well be delegated to a third party with the capability and experience to manage the same.

b) Secondly the discussion draft appears to suggest that contributions to a CCA “must generally be assessed based on their value (rather than their cost) in order to be consistent with the arms length principle” \textsuperscript{102} While it is not entirely clear whether this is intended to apply to ongoing contributions as well as buy-in payments, the inclusion of a value based concept for normal ongoing contributions would be problematic, administratively cumbersome and likely lead to many disputes between countries and in all likelihood, double taxation.

Another related matter to the Discussion Draft is the interaction of those proposals with the USA rules on CSAs under Treasury Reg, S 1.482-7. There are many aspects where the Draft proposals are consistent with the US rules but there are some important exceptions. These mismatches, if not addressed, could create issues for non US MNEs operating in the USA and USA companies operating in other OECD countries. For example, as noted above, the apparent requirement in the OECD draft for all participants in a CCA to be capable of making decisions regarding risk does not exist in the USA regulations. A similar position exists with regard to the aforementioned issue of measuring contributions at value.

On the flip side the USA rules require the various interests (e.g. geographic rights) in a CSA to be exclusive and non-overlapping which is not raised at all in the OECD draft.

It is not within the scope of this paper to address this matter in any detail. However there is a useful and brief analysis of it in a DLA Piper article dated 19\textsuperscript{th} May 2015.\textsuperscript{103}

\textbf{6. Withholding Taxes}

\textsuperscript{101} OECD Discussion Draft of 29\textsuperscript{th} April 2015 on Revisions to Chapter VIII of the Transfer Pricing Guidelines on Cost Contribution Arrangements (CCAs)- paragraph 13.

\textsuperscript{102} Ibid-paragraph 22

\textsuperscript{103} Article by Mumi Hemrajani and Eric D. Ryan dated 19\textsuperscript{th} May 2015 on OECD Discussion Draft on Cost Contribution Arrangements vs US tax rules on Cost Sharing Arrangements :key comparisons
This is one area where Asian countries surveyed differ significantly from the Western countries surveyed and by comparison, withholding taxes are a negative factor in evaluating licensing structures in Asia.

All the Asian countries surveyed imposed withholding taxes on royalties under their domestic laws. Rates of withholding were the reduced under appropriate double tax treaties but across Asia the treaties rarely eliminate withholding entirely. For example the Singapore tax treaty with The Netherlands reduces the domestic Singapore withholding tax of 10% on royalties to zero on certain royalties and a number of Japan’s treaties offer the same but otherwise most of the double tax treaties between Asian countries or between Asian countries and the rest of the world only reduce the withholding to rates ranging from 5-10%. The position is much more favourable in the Western countries surveyed. Some of these jurisdictions do not impose withholding tax on outgoing royalties at all e.g. Luxembourg, Netherlands and Switzerland and in the other countries their treaty networks with other western jurisdictions typically reduce withholding to zero unless the payment exceeds an arm’s length amount.

The position becomes even more obscure in Asia where payments are made under cost sharing arrangements. These may include buy-in payments or ongoing payments. Unfortunately the withholding tax position on the character of these types of payments is very unclear in most Asian countries. In certain Asian countries even payments to acquire IP outright are potentially subject to withholding tax depending on the characterization of the payments in the country concerned. This is simply not the case in the Western countries surveyed.

The withholding taxes or even the uncertainty over their potential application, create barriers and potential costs for Asian licensees or Asian entities seeking to enter into cost sharing or joint research and development agreements with Western counterparties. It seems surprising that such barriers still exist in such a dynamic region where the countries and their emerging MNEs are so keen to absorb, adapt and improve upon existing technologies and move up the value added equation. Singapore is a very obvious example in this respect. It can no longer compete as a low cost manufacturing or service location and must offer high value added content and utilize technology if it is to continue to thrive in its next 50 years. This is especially the case given its ageing population and land constraints i.e. productivity must increase.
Section 6- Brief Consideration of Patent Box Regimes

6.1. Introduction

Patent box regimes are now in place in a number of countries including Belgium, China, France, Hungary, Luxembourg, Netherlands, Spain and the UK. Effective tax rates on qualifying income under these regimes generally range from 5% to 15%. Some of these regimes have already been in place for a number of years (e.g. Hungary 2003; Netherlands and Belgium 2007).

The regimes do differ in terms of the nature of IP related income that qualifies for the incentive; some regimes restricting qualifying IP primarily to patents (e.g. the UK), patents plus IP from approved R&D projects as in the Netherlands while others may include know-how, trademarks and designs (e.g. Luxembourg, Spain and Hungary). In addition the calculation of the qualifying income from such IP also differs, some restricted to royalties and others to the patent income. The lower effective tax rates in some countries are obtained by way of tax deductions from the income rather than applying a reduced tax rate as such.

One familiar theme in this paper that is also evident in the various patent box regimes is the need to precisely identify the IP in question and the income derived from that IP.

As other traditional tax efficient structures come under attack globally and with the BEPS focus on value creation and substance, countries without such regimes are naturally concerned that their competitiveness in attracting value added operations is potentially threatened. Furthermore many developed countries with a high cost base need to move up the value chain by increasing innovation and productivity (familiar themes indeed for Singapore but it is certainly not alone in this drive). Accordingly, back in October 2014, Ireland announced the proposed introduction of a “Knowledge Development Box” (KDB). While details are not yet finalised the regime is expected to be similar to patent box regimes in other European countries. The effective tax rate is likely to be somewhere above 5% but lower than the UK’s 10%.

With similar competitiveness concerns being voiced in the USA, a discussion draft proposal for an innovation box regime was released on July 29, 2015. This followed on from the recommendation contained in a report from the Senate Finance
Committee’s international tax reform working group. While this is a serious proposal in the USA, progress is likely to be slow as seen in recent years with other US tax system reform proposals.

There have been similar calls in Singapore for a specific IP regime but to date Singapore appears to have settled on its existing incentive regimes that are already premised on having substantive activities in Singapore. Indeed it may well be prudent not to amend or change these regimes at present, pending the outcome of BEPS Action 5 (Countering Harmful Tax Practices). See 6.2 below.

### 6.2 Harmful Tax Practices and Potential Impact on Patent Box Regimes

In September 2014, the OECD issued a progress report on “Countering Harmful Tax Practices Effectively Taking into Account Transparency and Substance” under BEPS Action 5.

The September 2014 report recommended that preferential intangibles regimes should incorporate a “substantial activity” requirement. The basic premise of the substantial activity requirement is that it should assist in aligning substance with taxable profits. The report also discussed possible approaches to achieve this and one of the favoured approaches was the nexus approach.

Effectively, the nexus approach would limit the amount of income that may be relieved under a Patent Box or equivalent regime to the proportion of income that is directly attributable to “qualifying expenditure” incurred by that taxpayer in that jurisdiction.

In order to reach a consensus on a single approach, a proposal was put forward by Germany and the UK, which was endorsed by G20 leaders in Brisbane. The proposal has since been endorsed by all OECD and G20 countries. The agreed approach maintains the underlying principle of the nexus approach proposed in the September 2014 report but makes some amendments, which are briefly described below:

- Countries may allow for an uplift of 30% for qualifying expenditures - the expenditures that a taxpayer incurs on IP and which can be taken into account in the nexus approach calculation can, in restricted circumstances, be increased by 30%. However it may only be granted to the extent that expenditure has been incurred by the taxpayer e.g. through related party outsourcing
- Closing old regimes to new entrants – countries that have IP regimes that are inconsistent with the nexus approach are expected to take steps to amend
those regimes and the process to do this should commence in 2015. In addition there can be no new entrants to such IP regimes after 30 June 2016.

- Grandfathering and transition – taxpayers benefitting from existing regimes that do not comply with the nexus approach will not be able to receive any additional tax benefits from those regimes after 30 June 2021.

It remains to be seen how this will impact Patent Box or similar regimes. Certainly MNEs that perform R&D virtually around the globe depending on skill sets and costs may find the regimes much less appealing and in some respects the provisions will force such entities to house R&D more centrally again if the benefits of the regime are to be maintained.

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Word Count (excl Appendices) : 30517

Consider:

More case law discussion??

More on realistically available alternatives?

More on bargaining power?

More practical examples?