A Tale of Two Technologies: Transfer Pricing of Intangibles In the Digital Economy

The author examines how technology and other intangible property is priced outside the controlled environment of intercompany transactions, considering economic models applied in other relevant contexts, such as technology related to digital and mobile commerce. His analysis occurs in the context of global concern about the erosion of the overall base of taxable income that leaves large profits earned across multiple jurisdictions untaxed.

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Perhaps it is neither the best of times nor the worst of times, but tension is building between multinational companies and tax authorities residing in various capitals around the world, particularly where tax and technology issues intersect. From Paris to London, from Bombay to Beijing, and from Tokyo to Washington, D.C., there is intense scrutiny on fiscal concerns amid rapid globalization and technological advances. Collectively, these trends are having dramatic effects on economic activities and relationships.

In the international tax context, these economic trends are neither a background nor a mere “sign of the times.” They actually pose a direct challenge to the existing international tax regime, rules, and regulations, and they increasingly put multinational companies and tax authorities in conflict. Witness, for example, the U.S. Internal Revenue Service claims recently made public against Amazon.com, alleging that the major e-commerce company misreported $2.2 billion of taxable income outside of the United States, primarily in a lower tax jurisdiction, Luxembourg.1 There are considerable numbers of similar tax controversies at various procedural stages, if not yet filed in U.S. Tax Court, while similar cases are heard in other courts around the world.2

This article will focus on economic analysis of technology adoption and how technology and other intangible property is priced outside the controlled context of intercompany transactions—that is, at arm’s length. Intangibles valuation issues central to much of this tax controversy will be addressed, in direct reference to relevant global efforts spearheaded through the OECD’s draft revised transfer pricing guidelines on such issues.3

In particular, economic models applied in other relevant contexts will be considered, including those involving technology related to digital and mobile commerce. Such contexts include analyses applied with respect to “fair, reasonable and nondiscriminatory” (FRAND) royalty obligations required under standard-setting guidelines in those industries, as well as in intellectual property case law contexts. The author has concluded that there is general consistency in terms of both

1 See, for example, “Overcoming Veritas: Can the IRS Make a Better Argument For the Income Method in Amazon’s $2.2 Billion Challenge?,” 21 Transfer Pricing Report 959, 2/7/13. Also see “Vodafone Wins Supreme Court Case; Transfer Pricing Assessment Pending,” 20 Transfer Pricing Report 807, 1/26/12, covering cases regarding mobile technology heard in the Bombay High Court and the Supreme Court (Mumbai).

2 See “Revision of the Special Considerations for Intangibles in Chapter VI of the OECD Transfer Pricing Guidelines and Related Provisions” by Working Party No. 6 of the OECD Committee on Fiscal Affairs, dated June 6, 2012. Hereafter, the term “draft revised Chapter VI” will refer to this publication and the “OECD intangibles project” will refer to this draft and the related activities of Working Party No. 6.
the economic and valuation principles applied in these contexts and those that would be expected in arm’s-length analysis. As discussed, this is not surprising given the many parallels among all of these contexts, with respect to intangible property valuation and other related aspects.

**OECD BEPS Report**

Such issues are cited among “key pressure areas” in a recent OECD report, “Addressing Base Erosion and Profit Shifting,” referred to as the BEPS report. The report describes the incongruous nature of various domestic tax laws and how this undermines long-standing global tax principles aimed at minimizing economic inefficiencies that can emanate from countries’ sovereign rights to tax multinational enterprises. The report also highlights growing concerns that multinational companies’ natural instincts to (legally) shift taxable profits to lower tax jurisdictions have reached much greater extremes, in part due to this dynamic environment. The result is erosion of the overall base of taxable income on a global level, leaving large amounts of income earned across multiple jurisdictions completely untaxed anywhere.

It has long been a mission of the OECD to prevent the deleterious effects of double taxation on the world economy where possible, in part by facilitating a global network of bilateral tax treaties with common rules to avoid such over-taxation. But now the Paris-based organization cites “double non-taxation” through BEPS-related transactions and structures as the greater threat to fiscal policy and economic and tax efficiency among countries worldwide.

**Transfer Pricing, Intangibles, And Digital Commerce**

The BEPS report outlines key pressure areas affecting global tax systems and multinational taxpayers. Named among critical action items in the report’s conclusion are two subjects of particular relevance: transfer pricing involving intangibles (including technology) and digital commerce. In an urgent call to action for all stakeholders in the international tax community, the BEPS report seeks to stimulate global efforts toward the following ends:

- Improvements or clarifications to transfer pricing rules to address specific areas where the current rules produce undesirable results from a policy perspective. The current work on intangibles, which is a particular area of concern, would be included in a broader reflection on transfer pricing rules.
- Updated solutions to the issues related to jurisdiction to tax, in particular in the areas of digital goods and services. These solutions may include a revision of treaty provisions.

Furthermore, the rapid change and dynamic nature of global and mobile commerce are converging to further affect issues cited by the BEPS report, which also notes, “These tendencies become more pronounced over time as the economy evolves from bricks and mortar based businesses to more mobile information technology and intangibles based businesses.”

**Contextually Relevant Economic Analysis**

Economic models that focus on new technology adoption, and the business and investment decisions involved in such cases, have been developed in other commercial and policy contexts. These examples will demonstrate solutions to problems similar to those that must be addressed for purposes of transfer pricing valuation. As such, they reinforce aspects of the policy direction being developed in, for example, the OECD intangibles project. The examples also introduce helpful alternative perspectives that are consistent with the arm’s-length principle in important respects.

Estimating the inherent value associated with the adoption of one technology over another is a key element in modeling appropriate royalties for standard essential patents (SEPs)—that is, patents covering rights in technology adopted as “essential” according to standards-setting organizations. Standards setting is frequently seen in industries relevant to the digital economy such as the markets for smart phone technology, mobile telecommunications equipment, and digital audio compression and delivery technology.

The question in the standards context is the relative value of the advantages of one technology over another, prior to its inclusion in the standard—a subsequent event that confers greater certainty to the technology owner with respect to its adoption, as well as a corresponding commitment to license the technology on terms that are FRAND according to the policies under the standard.

Arm’s-length and FRAND analyses face similar problems, and the solutions posed in each context are also consistent in important respects. The problems are similar in that both FRAND and arm’s-length analyses must determine what is a fair and reasonable price, such as that to which independent parties would willingly agree. Further, both seek to preserve such market-based (or arm’s-length) pricing in a controlled context that otherwise likely would result in pricing distortions.

Models developed in the technology standards area share other common themes with arm’s-length analysis of cross-border transactions involving intangible property. The two areas are consistent regarding the need to attribute value across different assets, activities, and functions. In a transfer pricing context, this may be with respect to the contributions of different entities within the multinational group. In the standards context, the functional and user demand contributions of specific IP, technology, and business elements must be weighed against others, such that the sum total of royalties attributed to each individual IP or technology element does not exceed the compensation available to all of the IP combined, given the total market value that end users are willing to pay.

Properly applied, FRAND royalty and arm’s-length analysis also must take into account alternative or complementary technologies, related products or services, and the contributions of each of the parties to a licensing transaction. Viewed at this general level, a consistent set of economic and valuation principles af-

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5 BEPS report, pp. 10, 52, and elsewhere.
6 Ibid., p. 45.
fect both transfer pricing analysis of intangibles and this IP standards context.

**Control**

As noted, both FRAND and arm’s-length analysis address an element of “control” that exists or is conferred on specific parties to the transaction. Both regimes seek to restrain such control that, left to its own devices, might otherwise distort the pricing arrangement demanded or concluded.

When a technology standard setting organization selects a technology element or patent as part of a standard, the licensor of that technology gains an element of control over licensees that does not predate the technology’s selection as an approved standard. That is, when a license to an SEP is required to comply with the standard, it substantially reduces or eliminates alternative technology options to licensees and potentially holds them captive to SEP licensors.

At this juncture, the relative market power and enhanced bargaining position of the SEP licensor yields concerns that improper pricing practices might ensue. Such mispricing has the potential to reduce the overall welfare among producers and consumers at large. Users or prospective licensees often contest an SEP licensor’s royalty offers as unfair and overpriced—that is, not compliant with FRAND obligations under the standard.

A closely related policy issue (referred to as patent hold-up) arises when an SEP licensor seeks an injunction against the products of a licensee or user that disputes the SEP licensor’s royalty offer as violating its FRAND obligations. There are many current disputes in this context, including disputes involving smart phone and mobile technology standard patents owned by major companies operating in such markets.

**Comparing Alternatives**

For transfer pricing purposes, arm’s-length analysis must heed the fact that independent parties compare alternatives in making decisions about whether to invest, approve projects, or conclude transactions. This fact is equally relevant to decisions about adopting or acquiring rights in technology. Existing OECD transfer pricing guidelines emphasize this aspect of arm’s-length behavior. Meanwhile, Section D.1.(i) of draft revised Chapter VI also is consistent in its discussion of “options realistically available” to the parties in an intangibles-related transaction in paragraphs 80-83.

It is in fact necessary to compare alternatives in order to maximize value or benefits, or minimize related costs associated with any transaction, and it is simply rational commercial behavior to compare alternatives to get the best value at the best price. Additionally, no decision is taken that independent parties foresee would leave them worse off than if they had done nothing at all. In this sense, “no action” is always one of the available options.

As will be seen in contextually relevant examples below, options realistically available may be hypothetical, but they have very real effects on prices negotiated between independent parties. Such opportunity costs (and benefits) are not fiction—they largely inform most commercial activity (consider comparison shopping, capital budgeting decisions, or alternatives like renting versus buying a home).

**A Tale of Two Technologies**

In an economics paper entitled “Standard Setting, Patents, and ‘Hold-up,’” Joseph Farrell, John Hayes, Carl Shapiro and Theresa Sullivan provide a model for setting FRAND royalties and measuring pricing distortions resulting from the patent hold-up problem (hereafter referred to as the FRAND model).8

The FRAND model examines a number of considerations that fit neatly into the context of comparing alternatives, reflecting aspects of arm’s-length analysis of intangibles as discussed above. It includes a form of cost-benefit analysis applied to two competing technologies, Technology 1 and Technology 2, which a licensee must compare in making informed investment decisions regarding developing and producing its products.

The model describes the “inherent value” of Technology 1 and Technology 2, respectively, as \( N_1 = B_1 - C_1 \) and \( N_2 = B_2 - C_2 \). This demonstrates that a technology user will receive the benefits (B) and incur the costs (C) under each alternative. In each case, \( N \) reflects the value realized by the user in selecting a given technology before paying a royalty. Of course, there is a third alternative not explicitly shown here—if both \( N_1 \) and \( N_2 \) are negative, then the user will not choose either technology. It sounds simple, but this issue resurfaces in transfer pricing controversy in which taxing authorities question whether independent parties would have undertaken transactions that appear to leave multinational company affiliates worse off, whether such transactions involve intangible property or otherwise.

In the FRAND model, even if the two technologies are royalty-free, there are assumed differences in their inherent values, \( N_1 \) and \( N_2 \). For example, each requires a user to incur different costs and make investments, and each produces different benefits. In the model, the FRAND paper authors assume Technology 1 to be superior and so define its “inherent advantage” (\( V_A \)) as a net positive—\( V_A = N_1 - N_2 \)—when compared with Technology 2. The inherent advantage, \( V_A \), reflects the mutual gains from trade that the licensor and user combined will realize if the technology is licensed. It also is the maximum royalty the user will pay before Technology 1’s attractiveness is reduced to that of Technology 2.

The royalty equation for Technology 1 is the same whether one assumes that:

- both technologies are patented (or otherwise covered by intellectual property), or
- only Technology 1 is patented because it is superior.

In either case, the user will select Technology 1 over Technology 2 if \( N_1 - R_{1A} = N_2 \), where \( R_{1A} \) denotes the royalties charged by its licensor/owner.9

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8 Farrell et al., 74 Antitrust Law Journal No. 3 (2007).
9 In this pure form, the owner of Technology 2 cannot successfully negotiate a royalty regardless of whether it is patented, because the user always will strongly prefer the superior technology, and its pursuit of a share of its inherent advantages will substantially eliminate the bargaining power of the Technology 2 owner.

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7 OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations, paras. 1.34, 9.59-9.64.
Accordingly, it also can be stated that $N_1 - N_2 = R_{IA}$, so it must hold that $V_A = R_{IA}$. This means that royalties for Technology 1 can only be charged up to an amount that is equal to the inherent advantage, $V_A$. It provides over and above Technology 2, and no more. Of course, the IP licensor and the user will negotiate this royalty. The ultimate outcome will result from the relative bargaining power ($B$) of the IP licensor over the user. Thus, the model also holds that $R_{IA} = BV_A$.

Here it is clear that the proper “price,” a royalty, is derived substantially through a process of comparing alternatives available to the buyer (the technology user), taking into account its opportunity costs and benefits including those associated with the option not taken.

The FRAND model also incorporates other aspects relevant to arm’s-length analysis of intangibles. For example, the investments made by a licensee that relate to its expectations regarding the use of Technology 1 affect the royalties it is willing to pay. This is true because such investments will be wasted if the user cannot conclude or maintain a deal with the owner of Technology 1 and must switch to Technology 2. Thus, the user’s opportunity costs associated with its investments in assets related to Technology 1 become part of the licensor’s potential gain and pricing advantage.

After this investment by the user, the new royalty equation is $R_{IA} = B(V_A + K)$, with $K$ denoting the user’s investment in assets related to Technology 1. The owner of Technology 1 experiences a similar pricing advantage when it has SEP status, as is the case with the lump sum payment (for example, differences in credit terms) to put the transactions on an equal footing.

**Ex Ante Analysis**

Of course, no one can predict the future. But whenever a commercial transaction takes place, the parties’ expectations about the future inform the decisions they make about purchases (or sales), related investments, and activities as well as the amount they are willing to pay (or receive) for products, services, or rights to use property related to the transaction. They also will take into account other related costs and benefits. In a general sense, every arm’s-length transaction includes some ex ante aspect.

Technology adoption such as that demonstrated in the FRAND model involves investments whose benefits are generally realized over longer periods of time. In other relevant contexts, these time horizons extend further, such as when technology development is considered. This is the subject of highly controversial transfer pricing and intangible valuation issues associated with R&D cost sharing arrangements such as those confronted by Amazon in its Tax Court case.

**Transaction Value Versus Structure**

Arm’s-length analysis must carefully distinguish between the form of arm’s-length compensation versus the amount, or value, of compensation. The purpose of arm’s-length analysis is to establish the latter; value itself is only indirectly determined by the form or structure of the transaction.

This is not to suggest that different forms of compensation are less relevant to an analysis. To the contrary, in order to make an apples-to-apples comparison of otherwise comparable transactions, it is necessary to understand any differences in the forms of compensation under each and to take into account any adjustments to such payments (for example, differences in credit terms) to put the transactions on an equal footing.

Of course, when payment terms or income streams vary between transactions in a comparative analysis, it is also necessary to consider them on a net present value (NPV) basis in order to make a truly valid comparison. The success of this analysis depends on the availability and quality of data (and the quality of related assumptions). One must also take into account interrelated aspects of each transaction, its terms, and the different risks associated with such terms.

For example, assume an analysis of royalties based on three agreements, all between unrelated parties, licensing similar technology. Assume that each of these arm’s-length royalty agreements provides for a 2 percent running royalty rate on sales. All evidence mentioned thus far supports a 2 percent royalty.

However, assume that Agreement 1 includes a minimum guarantee of $200,000 per year over five years, Agreement 2 includes a one-time lump-sum payment of $1 million (treated as a minimum payment in the first year), and Agreement 3 includes no additional payment. In this case, one must look beyond this 2 percent royalty rate royalty rate for an accurate picture of the compensation paid to use the technology. In addition, the different payment terms reflect very different allocations of risk between the parties.

Carrying the example further, assume that all three licensors expected licensees to achieve sales of $10 million in each of the first five years. On an NPV basis, the licensor would realize the same absolute royalties ($758,000) and the 2 percent royalty rate under both Agreements 1 and 3.10 Under Agreement 2, however, the effect of the lump sum increases the effective royalty rate to nearly 4 percent on sales over the same period when examined on an NPV basis.11 This agreement also substantially limits the licensor’s risk and shows a guaranteed absolute amount of royalties that effectively doubles the expected total royalties when examined during the five-year period.

If we instead assume that all licensees’ expected sales are of only $5 million per year, the licensor under Agreement 1 sees the same result in absolute terms (that is, the same royalty amount)—the minimum guarantee has mitigated the licensor’s risks. But note that the royalty rate is now effectively 4 percent (that is, $200,000 divided by $5 million in each year). This higher royalty rate is likely to be less important than the fact that the overall expectations regarding the licensee’s success are reduced. The licensor’s real preference is presumably to exceed the minimum and maximize royalties, not royalty rates. In any event, the stated 2 percent running royalty rate alone is incomplete information in this scenario, as is the case with the lump sum payment.

10 All examples in this section assume a discount rate of 10 percent. Agreements 1 and 3 each realize royalties of $200,000 per year over five years, which is equal to $758,000 on an NPV basis, when assuming $100 million per year in sales.
11 For Agreement 2, a year 1 payment of $1 million and royalties of $200,000 in each of years 2 through 5, discounted at 10 percent, produces an NPV of $1.48 million in royalties. The NPV of 5 years of sales at $10 million is $37.9 million. Thus, 1.48 divided by 37.9 produces an effective royalty rate of 3.9 percent on an NPV basis.
sum agreement. In Agreement 3, the licensor’s royalties are now cut in half along with the royalty base—there is no risk alleviation in this royalty structure.12

The point illustrated here is not only that an NPV analysis is necessary to compare alternative transaction values when variations in their payment terms or income streams are present. An analysis must also examine all relevant aspects of the transaction as a whole, taking into account compensation for interrelated costs and benefits regardless of whether they are accounted for separately under different transactions as structured. The risk effects of different terms should also be considered. Not taking account of such issues can produce unwanted effects on the analysis and lead to wrong conclusions.

Nevertheless, sometimes analyses separate the valuation of rights to use intangibles, such as software, from the rights to receive updates and improvements, even when the latter are customarily part of the overall transaction at arm’s length. Similar issues can occur with respect to R&D cost sharing arrangements when the valuation of a buy-in payment for all rights in existing technology is made without considering all the relevant costs and benefits under the entirety of the arrangement—though the arrangement itself has the express purpose of further developing and commercializing the technology. Analyzing one part of a transaction (for example, a lump sum buy-in payment or software licensing fee) without considering the interrelated aspects of other parts (for example, rights to new developments and improvements) results in an incomplete picture that can undermine the overall analysis and conclusions.13

As discussed below, a royalty value derives from the parties’ separate expectations about the success of the relevant business activities. These expectations may not be equal, but they may produce a range of potentially agreeable royalties where such expectations overlap.

Issues regarding varying transaction terms also may pertain to FRAND dispute resolution contexts. For example, a paper by chief economists of U.S. and European antitrust agencies recently called for cash basis (present-value) licensing term options on the part of licensors in a dispute, to overcome transparency issues when complex payment streams occur between parties to cross-licensing arrangements. The report states:

The FRAND dispute resolution process should require that the licensor specify a cash price for its SEPs as an alternative to other pricing arrangements to aid in evaluation of the proposed license terms by the third party. Determining if a complex package of cross licenses satisfies FRAND is difficult for a third party. If the licensee has the option to choose a FRAND cash price, but instead chooses to cross-license, then clearly it is better off.14

The passage above also reflects the basic principle that a licensee will compare the value associated with its alternatives—indeed of the form or structure of the deal—in considering its best options.

Transfer Pricing Valuation of Intangibles And OECD Examples

Independent parties to a transaction usually compare the present values of income streams from their alternatives involving the same or similar assets and investments. This is true whether or not there are intangibles that are legally protected. These arm’s-length conditions are well depicted in Example 19 of the draft revisions of Chapter VI of the OECD guidelines, where they are applied to hypothetical related parties that operate under such conditions.

In Example 19, a parent company (P) considers transferring intangibles to a related manufacturer (S) in a lower-cost, lower-tax country. Note that in this case, as would occur at arm’s length, the starting point for the analysis involves P computing the present value attributed to its intangibles under the status quo.15 This is an ex ante condition described in other contexts above (in some litigation contexts referred to as a “but for” analysis—that is, “but for” a subsequent event such as the proposed transfer of the intangibles). It is the baseline scenario upon which P considers its alternatives.

This baseline NPV is compared to the NPV of the alternatives faced by P. Similarly, S computes and compares its own alternatives on an NPV basis. These separate valuation processes done by each party form the bases upon which they negotiate (see Tables 2 and 3 in Example 19 of draft revised Chapter VI).

It is worth noting that the analysis in Example 19 neither separates nor determines relative values for the different types of intangibles to be transferred (patents and trademarks). There is no need to separate them in this case because these intangibles operate collectively, and no scenario is contemplated in which they would not, which suggests that no such scenario would maximize the return on these intangibles. This often occurs in arm’s-length scenarios when various intangible property items are bundled, such as in a software license.

However, in transfer pricing contexts, cases where two separate affiliates contribute different intangibles are more common, raising challenging valuation issues. Here, a profit split is often required; the draft Chapter VI defers much to the existing Chapter II of the OECD guidelines on this subject.

As in Example 19 and the FRAND model, unrelated parties negotiate by formulating their own separate analyses of the returns related to their investments associated with a transaction. The acceptable threshold for investment in the transaction is that the return is equal to or better than the company’s alternatives when using the same or similar assets and resources. At arm’s length, the views of both parties must be taken into account, as both perspectives form the negotiating positions that ultimately produce an arm’s-length result.

Furthermore, at arm’s length, independent parties do not necessarily value the total transaction in the same way, much less with respect to each of the underlying intangibles or other assets combined in such a transaction. They will likely exchange forecasts and other information necessary in negotiating the deal, but they
will not necessarily share equal views and assumptions regarding such information. After a negotiation, the only agreed arm’s-length value is the actual transaction price.

These arm’s-length-conditions explain why, contrary to some critiques of the draft revised Chapter VI, it is unlikely that independent parties share identical and equal views on the definition and value of each underlying component when intangibles operate or are transacted collectively. This should be clear when the parties’ respective starting points for the value of the entire transaction are not equal in the first place.

**Insights from Other IP Contexts**

There is much common ground between IP infringement damages estimation and transfer pricing analysis of intangibles as described in existing and draft OECD guidance. This should not be surprising, because both concern intangibles, and the hypothetical processes that underlie each (the “but for” analysis and the arm’s-length standard) are grounded in the same economic principles.

In IP damages contexts, as in transfer pricing, facts and circumstances and the resources, capabilities, and market conditions faced by the parties weigh heavily in the analysis, as do the uniqueness of the IP and its potential.

Interrelationships among other activities and assets are also highly relevant to this discussion, despite the fact that IP infringement damages often relate to a single intangible asset (such as a patent). IP damages analyses also consider interrelated assets (including production assets and potentially other intangible assets), related products and business activities, services, contributions of other parties, and other options available to both the IP owner and the infringer. Moreover, IP damages are calculated on a base of infringing product revenue that derives from the assets and resources of an entire business, in addition to the IP itself. This all sounds consistent with issues from a transfer pricing perspective.

Two primary approaches are used to calculate IP infringement damages: the “lost profits” method and the “reasonable royalty” method. The former measures the lost incremental profits that the IP owner would have earned “but for” the infringement—that is, profits on infringed sales. The standard for awarding lost profits is higher than that for a reasonable royalty, requiring proof that there were no non-infringing substitutes and that the IP owner had the capability (for example, the production capacity and distribution networks) to meet demand related to the infringing products.

If lost profits cannot be proven, the floor on damages is based on a “reasonable royalty” determined using 14 criteria that closely resemble the application of a comparable uncontrolled price (CUP) method in Chapter II of the OECD guidelines. Items 1 and 2, respectively, are the existence, if any, of an established royalty received by the licensor for the same IP; and rates paid by the licensee for any similar IP. Item 3 asks the nature and scope of these licenses, including any restricted or nonrestricted terms. Other items go down similar paths—a form of CUP analysis.

Having established comparable IP and royalty rates, the analysis turns to the commercial relationship of the licensor and licensee and whether they are competitors or collaborative (item 4). Interrelationships between patented and unpatented products and derivative business (convoyed sales) are then considered (item 6). Various other factors regarding both the IP itself and evidence found in comparable licenses are weighed as well.

Item 13 requires a form of residual profit analysis. This factor allocates “but for” profits across elements that are not patented, such as services provided with the product, manufacturing processes and costs, business risks, and other product or feature improvements that may have been contributed by the infringer and not the IP. In other cases, infringement damages are computed by directly deducting a “normal” rate of profit earned on the infringer’s other product sales from the total profit on infringed sales. The residual forms a basis for IP profit.

Not unlike Example 19 in the draft, the reasonable royalty calculation weighs all of these factors and the opportunity costs (that is, other options available) to both parties. An ex ante hypothetical license negotiation is premised on the minimum and maximum acceptable royalties for the licensor and licensee, given their best available alternatives at the time the infringement period began.

In IP infringement suits, one of the more contentious issues is how to split the “residual” represented by the range of royalties that both parties would be willing to pay or receive. Here, the guidance from case law remains somewhat limited. Nevertheless, the assets, resources, and capabilities of the infringer are weighed, and it is generally assumed that some of the compensation should go to the hypothetical non-infringing sales that the infringer would have made in a “but for” scenario.

Thus, opportunity costs weigh heavily in these analyses as well; they can relate to either or both parties and cut either way. For example, the availability of substitutes cuts into the amount of infringed sales, reducing the award to the IP owner (that is, assuming that absent the use of the infringed IP, the infringer would have used an alternative technology). Additionally, the IP owner may have lost sales of products related to the patented product (convoyed sales), and lost profits from these sales can increase its award (even though the infringer and other sellers did not infringe with respect to such related products).

Weighing the relative contributions of various items is often a challenge where IP-related disputes are concerned, not unlike in transfer pricing contexts.

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16 Comments on draft revised Chapter VI may be viewed at http://www.oecd.org/ctp/transfer-pricing/Intangibles_Comments.pdf.

17 Four criteria applied in finding “lost profits” are collectively referred to as the Panduit test after Panduit Corp. v. Stahlin Brothers Fibre Works Inc., 575 F.2d 1152 (6th Cir. 1978), in which they were outlined. The other two include proving the existence of demand for the patented product, and proof of the amount of profit lost per lost sale.

18 Referred to as the Georgia-Pacific factors, these derive from case law resulting from Georgia-Pacific Corp. v. U.S. Plywood Corp., 318 F. Supp. 1116, 1119-20. (S.D.N.Y. 1970), modified and aff’d, 446 F.2d 295 (2d Cir. 1971). A 15th factor posits the hypothetical negotiation itself, based on full consideration of the other factors.
Conclusions

The foregoing discussion on measuring various contributions to value in an intangibles transaction brings us full circle to the problems posed in the BEPS report: how to ensure fair, consistent, and efficient treatment in taxing the many affiliates of global companies across different tax jurisdictions. Indeed, such questions are fundamentally related to the relative value contributions of those affiliates in different countries, based on their functions, activities, assets, and risks.

Taxing authorities look at the separate-entity results of multinational companies’ affiliates in their jurisdictions to determine whether there is additional taxable income due to them. When they assert that an affiliate has underpaid its taxes in the local country, they are effectively stating that the affiliate should earn more income given its contribution of value—value that was allegedly understated or mispriced in its transactions with affiliates in other countries. This is the case whether or not such value is itself directly or indirectly related to intangibles or other forms of contribution.

Note that where one affiliate should earn more income in one jurisdiction, an affiliate it transacts with in another tax jurisdiction may thus earn less income. Otherwise, double taxation may occur. But as the BEPS report notes, the current global tax system facilitates the potential that the taxable income reported by all affiliates combined understates the combined value they create. This state of affairs produces detrimental effects on fiscal policy worldwide and economic inefficiencies that disadvantage local companies (and others) that cannot undertake such international tax arbitrage, according to the BEPS report.

An accompanying aspect of the BEPS report concerns rules regarding taxation of the activities of multinational companies that have no corporate legal presence in the jurisdiction (nonresident taxpayers). The business profits from these nonresident affiliate activities may be taxable to the extent that they constitute a permanent establishment within the local, or source, country.

A reasonably consistent set of rules define PE status within the global network of tax treaties now in place. But as the BEPS report highlights, these rules relate largely to physical presence in a given country and other considerations that emerged in the first half of the 20th century—at a time when the concepts of “virtual company” and “electronic commerce” were hardly imagined. As the BEPS report notes in two key passages:

Updated solutions [are needed to address] the issues related to jurisdiction to tax, in particular in the areas of digital goods and services. These solutions may include a revision of treaty provisions.19 (Emphasis added.)

These tendencies become more pronounced over time as the economy evolves from bricks and mortar based businesses to more mobile information technology and intangibles based businesses.20 (Emphasis added.)

Such issues thus are closely related to the intangibles valuation issues discussed above—though detailed discussion on PEs, for example, goes beyond the scope of this article. Nevertheless, all of these trends coincide with a period of worldwide fiscal crisis and post-globalization. As such, governments in capitals across the globe are understandably concerned about securing their fair share of a potentially shrinking pie of taxable income, in an age of global e-commerce, “mobile information technology and intangibles based business.”21

19 BEPS report, pp. 10, 52.
20 Ibid., p. 45.
21 For more examples, see “French Report Urges OECD, G-20 Action to Boost Taxation of Global Internet Giants,” 21 Transfer Pricing Report 971, 2/7/13. Also see “China, U.S. Perspectives on Intangible Property Transactions,” 17 Transfer Pricing Report 571, 11/20/08, which includes an earlier discussion by the author on these issues.