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Intangible Assets and Intellectual Property Valuation

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A rapidly changing global business environment continues to lead to heightened awareness of intellectual property matters among business executives, academics and government officials. Multinational taxation, capital budgeting, mergers and acquisitions (including spin-offs), patent litigation, licensing agreements, and brand names and trademark issues represent just a few of the intellectual property issues many businesses face on a daily business. The purpose of this article is to provide an introduction to intangible assets which will allow readers to fully understand how the appropriate valuation of intangible assets is essential to a number of intellectual property matters.

What are Intangible Assets?

Although a seemingly straightforward question, we immediately see that intangible asset valuation can often be a subjective and complicated issue. The answer to our question depends largely on whom you ask. Different valuation experts and valuation organizations have varying definitions, often depending on the specific purpose and function of the intangible asset under consideration. For the purpose of this discussion, one of the best definitions of intangible assets can be found in Robert Reilly and Robert Schweihs' book, *Valuing Intangible Assets*. The authors define intangible assets in a narrow sense, applying a set of strict criteria, including that an intangible asset has the following attributes:

- Not physical in nature
- Specific identification and recognizable description
- Legal existence and legal protection
- Subject to private ownership and transferability
- Tangible evidence or manifestation of the intangible asset
- An identifiable "birth date"
- Subject to termination

It should be noted that all of these points, except for the first one, are applicable to tangible assets as well as intangible assets. It is important to remember the distinction between that which is tangible, e.g., physical in nature and touch, and that which is intangible. Generally, intangible assets fall



into a variety of categories, with some common ones listed below including an example of each.

- Marketing (brand names and trademarks)
- Technology (patents, processes, schematics)
- Artistic (musical compositions)
- Customer (customer lists)
- Contract (license agreement)
- Human Capital (workforce-in-place)
- Location (leasehold interest)
- Goodwill and Going Concern

Clearly there is some commonality among these categories. They are not meant to be exclusive, but rather an indication of the wide variety of intangible assets present in today's business environment. Furthermore, intangible assets are not a new occurrence, as many of the above categories (and intangible assets) have been around for a long time. What *has* changed is the value that is placed on intangible assets, thereby creating a wide variety of reasons to try and place a value on them. Understanding the reason for the intangible asset valuation, whether for tax purposes, corporate planning, or dispute resolution, is paramount when considering the nature of the intangible asset under investigation.

Intellectual property, on the other hand, is a subset of intangible assets – those that are “creations of the mind” and include artistic materials, patents, trademarks, etc. Intellectual property is most often considered in the context of litigation, or the field of intellectual property law. However, the boundaries of the intellectual property definition have migrated to include the innovative processes that create valuable intangible assets.

Why do we value intangible assets?

The reasons for valuing intangible assets and intellectual property are as diverse as the intangible assets themselves. In this section, we briefly touch upon several of the more common reasons for valuing intellectual property.

Tax Purposes

Multinational companies face a wide variety of challenging tax issues involving intellectual property. One example involves the licensing of intellectual property between domestic and foreign entities. Under Section 482 of the Internal Revenue Code, the appropriate transfer prices are subject to review by the Internal Revenue Service. Companies are required to justify intercompany transfer prices concerning the licensing and use of intellectual property by various foreign and domestic entities. For example, let us assume that Company X develops valuable intangible assets domestically and subsequently licenses the use of the intellectual property to foreign subsidiaries. These foreign subsidiaries are required to compensate the domestic entity for the use of the intellectual



property. As a result, Company X must adequately assess the future economic benefits attributable to the use of the intellectual property, to ensure that the domestic entity is reasonably compensated by the foreign subsidiary (and thus compliant with the Internal Revenue Service regulations). The domestic company might enter into a licensing agreement with the foreign subsidiary, where the foreign subsidiary will pay a royalty fee for the use of the intellectual property. How do we determine the appropriate royalty rate, sufficient to satisfy the IRS requirements? At the heart of this issue is the appropriate valuation of the intellectual property.

A second example involves cost sharing agreements (CSAs). CSAs are one area where the IRS focuses a considerable amount of attention. A cost sharing agreement represents an agreement between two or more parties to share the costs to develop one or more intangibles in proportion to reasonably anticipated benefits from the individual exploitation of interests in the intangibles that are developed. Multinational companies may use CSAs to shift profit to low tax jurisdictions, resulting in lower taxes and higher earnings. A key component of many CSAs involves “buy-in” and “buy-out” provisions. A buy-in payment includes the valuation of a non-monetary contribution to a CSA, particularly with regard to the contribution of intangibles. A buy-out payment reflects the consideration that must be paid under the situation where a withdrawing participant must be compensated for ceding its interests in the jointly developed intangible assets. Key considerations might involve buy-in payments as part of a cost sharing analysis where the intangible asset was jointly developed between domestic and foreign entities.

Patent Litigation

One of the most important intellectual property matters facing creative and innovative companies is the protection of valuable patents. Patent infringement is often a complex issue which requires a diligent review of the value of the patent and related intellectual property. In litigation proceedings, companies and attorneys look to valuation experts to appropriately value the intellectual property and patents which might have been infringed upon. Combining valuation practice with economic damage analysis will assist the courts in assessing the potential liability in patent infringement cases. The starting point is an assessment of the value of the intellectual property.

Brand Name and Trademark Valuation

Another equally important valuation issue facing business managers is the appropriate determination of the value of brand names and trademarks. One example involves the licensing of trademark use by third-parties. Companies need to recognize that the value of the trademark will dictate the appropriate compensation for use and disposition of the trademark by third parties. In a global business environment, which includes brand names and trademarks valued in the billions of dollars, understanding the true value of a company’s trademarks and brand names is essential for protecting brand equity and recognition.



Mergers and Acquisitions

When a company elects to divest a business segment with valuable intangible assets, the sale price will depend on an accurate valuation of assets, including intellectual property. At the heart of this issue is the perceived future economic benefit a willing buyer might receive through the acquisition and use of the intellectual property. As a result, valuation experts must employ sound valuation theory in assessing the true value of the intangible assets and intellectual property.

How do we value intangible assets?

Once we have identified the intangible assets as well as the reason we are conducting our valuation, we need to select the appropriate methodology. Typically, valuation experts and appraisers employ a variety of methods and compare the final results to ensure that they are reasonable and accurate. It is beneficial to determine the value of an intangible asset using multiple methods and in fact, many tax regulations require the use of multiple methods. All too often there is a range of values for the intangible asset, depending on which method is employed. Ideally, the methods will give similar results, although there are cases where a particular method may result in an outlier. The reason for utilizing multiple valuation methods is to ensure corroboration in the value conclusion.

Valuation methods are typically derived from one of three universal approaches used in the valuation theory: the Cost Approach, the Market Approach or the Income Approach. Each approach comprises a large subset of methods, but there is also a significant amount of overlap between the various approaches. For example, it is rare to use an income approach that does not consider some component of the market approach and vice versa.

Cost Approach

The Cost Approach is based on the premise that a willing buyer would pay no more for an intangible asset than the cost to produce such asset. In other words, why pay more for an already created software program if it would cost you less to develop it yourself (forgetting about copyrights for the time being). Alternatively, when considering market conditions and the time value of money, it may be more prudent to purchase the asset “as is,” if in the long run the cost to develop it yourself proves higher than the purchase price. So how does the Cost Approach relate to intangible asset valuation? To gain insight into the value of the intangible asset under investigation, valuation experts often look to the Cost Approach to tell them how much it would take to “re-create” the asset, thereby giving an indication of the value.

The Cost Approach typically involves two types of cost, reproduction cost and replacement cost. Reproduction cost refers to the cost to actually reproduce an exact replica of the intangible asset, without considering changes over time that may affect the cost (e.g., increased efficiency through the use of computers). On the other hand, replacement cost involves examination of what it would take to build the asset using current knowledge and technology. The costs can be obtained from



internal company data on the original cost of each component or examination of the prevailing component costs pertinent to the valuation date.

Once the “cost” to either reproduce or replace the intangible asset has been determined, we must consider the effects of depreciation and obsolescence. Obsolescence factors can be attributed to one of three categories: physical, functional, or economic. Physical obsolescence refers to the physical depreciation or the wear and tear the asset has suffered over time. As you can imagine, this type of obsolescence is rarely found in intangible assets, as there is nothing to physically deteriorate (other than the physical manifestations of the intangible asset). Functional obsolescence represents the decline in value suffered by the intangible asset due to loss of functionality, of which technological obsolescence is a subset. Here the intangible asset may be in pristine condition and still fully operational, but has lost some of its value due to functional changes in the marketplace. Lastly economic obsolescence (or external obsolescence) represents a loss in value due to conditions external to the intangible asset. One example is a loss in value due to a regulatory ruling that effects the intangible asset. Only after we adjust for the obsolescence do we have a good handle on the value of the intangible asset.

As an example, let us consider the value of a workforce-in-place. A typical cost approach might look at the cost to effectively replace the existing workforce. Namely, we might estimate the cost to recruit, hire and train a replacement workforce. We would begin by looking at the compensation level of each employee, including the level of education and tenure. We can sum up the current compensation level and apply recruitment and training factors as our initial replacement cost. However, we must consider obsolescence, which appears in the form of functional obsolescence (would a replacement workforce necessitate the same number of workers or might we have excess capacity?), as well as economic obsolescence (where we could higher younger, more educated workers to replace older, less productive employees). Once we compile the data and introduce our adjustment factors, we can effectively compute the cost to replace our existing workforce.

Market Approach

Another approach to valuing intangibles that is usually investigated is the Market Approach. Here, we look toward comparable industry events to give us an indication of the value of an intangible asset (or assets). The market approach is based on examination of similar intangible assets that have been transacted in the marketplace. Unfortunately this method depends heavily on the availability and comparability of data. If there are not enough publicly available transactions, or if the comparability of the transactions is suspect, then we are better off looking to another approach.

If there are a reasonable number of transactions available for comparison, the first step in the market approach is to collect data on the transactions. For example, suppose we are concerned with the value of the FCC license of a given radio station. We would begin by collecting data on publicly



available transactions where comparable licenses have been bought or sold. After considering market factors, we could decide to compare the transactions to our own intangible asset on a common unit, such as price per watt, or price per listener. Again the decision of what comparable unit is left to the discretion of the valuation expert, and often hinges on the reliability of the data. Finally we apply the pricing multiple derived from our transaction and market analysis to our own subject intangible, thereby deriving a value for our intangible asset.

A second example involves the licensing of intellectual property and corresponding royalty rate. In transfer pricing analysis (under Section 482 of the Internal Revenue Code), businesses are often required to justify intercompany royalty payments for the use of intellectual property. A market approach could incorporate an analysis of functionally similar licensing agreements for the use of the intellectual property.

Income Approach

The most relied upon approach in valuing intangible assets is the Income Approach. Here, we determine intangible asset value by examining the future or expected income our intangible asset will generate. There are two main types of income approaches, the yield capitalization approach and direct capitalization approach. Both are loosely premised on four steps: (1) the determination of an appropriate income measure, (2) the estimation of a time period, (3) the projection of the income, and (4) the appropriate determination of a capitalization rate. The differences between the two approaches mainly reside in the choice of a capitalization rate, as the yield capitalization rate (or discount rate) is applicable over a discrete time period, while the direct capitalization rate is applied to a single income projection. It is important to stress that the two rates, although both called capitalization rates, are different from one another.

The yield capitalization method results in an intangible asset value derived from the sum of the present value of a stream of income attributable to the intangible asset over its life. One could argue that this method is preferable to the direct capitalization method (which is based on the assumption of constant income), as it allows for changes in the income stream.

In addition to these two income approaches there are numerous other approaches that can be labeled "Income" or "Market" approaches; these include incremental income approaches, the profit split method, and royalty analyses. The incremental income approaches, which can include the yield and direct capitalization methods, are based on examination of the additional income accrued by the existence of the intangible asset. The profit split method looks to split the income between the intangible asset and other tangible and intangible assets associated with it. The key to this method is the determination of the appropriate split of the profit, where one often looks to market transactions regarding royalty or transfer agreements. Finally, royalty analyses examine the payment a



licensee pays a licensor for use of a discrete intangible asset. These methods can be based on the actual royalty income or hypothetical royalty income.

The “royalty cost savings” or “relief from royalty” approach is one method based on the premise of hypothetical royalty income. Here, we are concerned with the economic benefit obtained by not having to license the intangible asset from another party. The value of the intangible asset can be examined by looking at the present value of the income saved by not having to pay the royalty. For example, suppose we are interested in determining the value of a particular brand name. Through our research we have determined that 2008 sales will be \$100 million, the long-term growth rate is 3 percent, the income tax rate is 37 percent, and our appropriate discount rate is 15 percent. In addition, after extensive review of market data we can determine that a market-derived royalty rate of 20 percent of sales is accurate.

To determine the intangible value of our brand, we capitalize the after-tax brand royalty sales using our discount rate and long-term growth rate. Thus, our after-tax brand royalty sales are \$12.6 million (\$100 million times 20 percent times one minus the tax rate of 37 percent). The value of the intangible asset is \$105 million, which is the \$12.6 million divided by a capitalization rate of 12 percent (our 15 percent discount rate less our 3 percent long-term growth rate). Although this is a very simplified example, it illustrates the conceptual methodology of the relief from royalty method.

Regardless of the method, of which there are many, it is essential to fully understand the specific intangible asset in question, to determine the purpose of the valuation, and, of course, to consider a variety of valuation methods. Each method has its pros and cons, given the often subjective and data-intensive nature of valuation. The one key to remember is to never forget the ultimate goal: to reach a final conclusion of the value that best represents the intangible asset.