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# Apple's Win Highlights Uncertainty in Valuing Tech Investments

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# Apple's Big Win Highlights Uncertainty in Valuing Tech Investments

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### Abstract

Apple's victory against Samsung in 2012 reaffirms the power of patents and the extent to which they drive profits in the technology sector.[1] It also highlights the fact that the precise contribution of intellectual property ("IP") to firm value is a matter of perspective. Technology companies must value IP every time they engage in M&A activity, intercompany technology licensing, or tax-motivated IP migration. Significant methodological differences in each area create potential pitfalls for firms and practitioners in an increasingly skeptical investor and regulatory environment.

The profusion of IP litigation presents an additional challenge to technology companies. Expert witnesses and technology-savvy jurors can reach widely divergent conclusions regarding IP value. Moreover, those valuations are likely to differ substantially from results reached in the course of purchase price allocation and transfer pricing studies. Careful management of the preparation and dissemination of these analyses may allow firms to avoid costly misinterpretations of the results.

### Introduction

Apple's 2012 victory against Samsung reaffirms the value of patents and the extent to which they drive profits in the technology sector. It also highlights the fact that the precise contribution of intellectual property ("IP") to firm value is not easily measurable. In *Apple v. Samsung*, Apple's experts estimated that the company losses were in excess of $2.5 billion as a result of Samsung's patent infringement. Samsung's experts countered with a figure closer to $520 million. The jury awarded $1.05 billion. Which of these calculations, if any, approximates the true value of the infringed patents?

Questions about IP value extend well beyond the courtroom. Technology companies are faced with these questions every time they engage in merger and acquisition ("M&A") activity, intercompany

1 *Apple, Inc. v. Samsung Electronics. Co.*, 678 F.3d 1314 (Fed. Cir. 2012).

technology licensing, or tax-motivated IP migration. Global technology firms often pursue these strategies simultaneously and, because valuation results are highly sensitive to their analytical context, companies may find themselves in the uncomfortable position of defending very different assessments of the value of their technology. Understanding accepted methodologies and their respective and comparative impact on estimates of IP value can facilitate a coordinated approach to these analyses. Well-reasoned and supported IP valuations may also avoid costly proceedings with courts, financial regulators and tax authorities.

## The Challenge of IP Valuation

IP drives enterprise value in technology-based economies. Unprotected sources of competitive advantage – know-how, processes and talent, to name a few - dissipate quickly in markets "turbo-charged" by immediate and continuous access to information. It's no surprise, then, to see companies like Apple vigorously defend their IP when they believe it has been unlawfully appropriated. As a result IP claims continue to escalate, with litigants expending enormous resources to quantify the value of the disputed IP.

Even absent litigation, companies pay close attention to IP, continuously searching for new ways to extract value from existing IP and hunting for sources of valuable new technology. Google's 2012 $12.5 billion acquisition of Motorola Mobility was part of a specific strategy to expand the market for its Android operating system and protect its smartphone manufacturing partners.

IP exploitation enhances shareholder value by generating competitive advantages that result in higher profits. Firms devote substantial resources to research and development ("R&D") activity, aggressively pursue IP through M&A, or employ a combination of both strategies. In addition, companies may extract additional benefits from IP, either by deploying it simultaneously in several locations worldwide or by structuring and/or migrating R&D activities to reduce income tax liability.

In the case of M&A, U.S. and international regulations require that the acquiring entity report the value of the IP it has purchased in order to promote transactional transparency. If the company is migrating R&D activity or licensing the resulting IP to its cross-border affiliates, tax authorities require an IP valuation analysis in order to ensure compliance with the arm's length standard and associated transfer pricing regulations.

Financial reporting and transfer pricing documentation requirements are not new; most companies are familiar with the accepted approaches to IP valuation for business combination studies and intercompany pricing analyses. Valuation and transfer pricing

*Well-reasoned and supported IP valuations may also avoid costly proceedings with courts, financial regulators and tax authorities.*

practitioners are aware of the differences in these approaches and the need to coordinate the respective analyses, especially when they involve exchanges of the same or similar technology at roughly the same time.

But the recent increase in IP litigation involving the biggest names in the technology sector presents an additional challenge to technology companies. Expert witnesses and technology-savvy jurors can reach widely divergent conclusions regarding IP value.[1] Moreover, those valuations are likely to differ substantially from results reached in the course of purchase price allocation and transfer pricing studies, compounding the confusion. In an increasingly skeptical investor and regulatory environment, companies can ill afford suspicions that they have manipulated courts, investors or regulators, by proposing different valuations of IP to suit their purposes in each area.

Even absent direct involvement in IP litigation, technology companies should anticipate more challenges to their intercompany royalty studies and purchase price allocation analyses as information from high-profile litigation becomes public. The fact that significant differences exist across accepted methodologies in each area creates potential pitfalls for firms and practitioners alike.

Understanding these differences will not only allow firms to anticipate and respond to challenges, but may encourage a more coherent approach to IP valuation in the first place.[2]

## Reasonable Royalty Approach

The U.S. Patent Act allows a prevailing plaintiff in a patent infringement suit to recover compensatory damages for the economic harm caused by the infringer.[3] Ideally, a damage award is based upon a determination of profits lost to the plaintiff as a result of the infringement. However, in cases where lost profits cannot be determined, either because the claimant has not lost sales to the infringer or because the calculation of lost profits is considered too speculative, the courts will accept a royalty analysis. In fact, even if lost profits can be determined, the Patent Act requires that, at a minimum, damages should reflect a "reasonable royalty" for use of the IP by the infringer.

The reasonable royalty approach posits a hypothetical negotiation between a willing licensor (the plaintiff) and licensee (the alleged infringer). The negotiation is assumed to take place on the date of first infringement. While the term "reasonable royalty" has no economic meaning, in order to be acceptable to both parties it must leave each better off than had it pursued other available alternatives. In the case of the alleged infringer, these alternatives include the possibility of designing around the patent to achieve comparable functionality without infringement. In cases where such a non-infringing alternative is feasible, the reasonable royalty cannot be higher than the design-around cost. Assessment of any alternatives yields a range bounded by the minimum acceptable royalty for the licensor and the maximum acceptable royalty to the licensee.

Typically, the courts accept a royalty analysis based on the IP-related profits anticipated by the infringer at the time of the hypothetical negotiation. In general, the royalty leaves the infringer with a portion of these intangible profits.[4] The argument is that

1 The *Apple versus Samsung* jury "ignored paid experts" and calculated the damage award itself. (2012, August 27). "Apple Victory Shifts Power Balance." *The Wall Street Journal,* p. A1. (2012, August 25). Elmer-DeWitt, Philip. "Apple v. Samsung: Meet the Foreman of the Jury." Retrieved from http//www.fortune.cnn.com. Occasionally, the difference between the plaintiff's and defendant's expert valuation is so extreme and the analyses so complex, that the court or jury is suspected of "splitting the difference" in awarding damages.

2 For ease of discussion, IP valuation for financial reporting purposes will hereinafter be referred to as "financial valuation" or the "financial reporting approach," while IP valuation for intercompany pricing purposes will be referred to as "transfer pricing valuation" or the "transfer pricing approach."

3 U.S. Patent Act (2012), 35 USC §284 (1952). Retrieved from http://www.uspto.gov

4 The courts may accept royalty rates on the high end of the range in cases of willful infringement, which was the principal finding in *Apple v. Samsung*. In addition, while the hypothetical negotiation is assumed to take place on the date of first infringement, courts sometimes consider

the hypothetical licensee would not agree to a royalty that did not allow it to earn a "reasonable" profit; economics dictates that the licensee would be willing to accept any royalty that results in higher profits than the next best alternative.

## Financial Reporting Approach[5]

For financial statement reporting purposes, an intangible asset is defined as one that is identifiable, "lacks physical substance" and is not a financial asset.[6] As long as that asset arises from legal or contractual rights, the asset will be recognized apart from goodwill. Intangible assets may be marketing-related, customer-related, artistic-related, contract-based or technology-based; this category of assets clearly includes patented technology.

When a U.S. firm makes an acquisition, it must recognize the assets acquired and liabilities assumed, and adjust for any non-controlling interest in the acquired entity. The Financial Accounting Standards Board (FASB) codified these requirements in ASC 805, which requires firms to use the purchase method of accounting when reporting business combinations. That is, the acquiring firm records the price of the merger as it would the cost of any asset and allocates the price to the tangible, financial and intangible assets acquired. Assets must be recognized at fair value, defined as the price at which an asset could be bought or sold in a current transaction between market participants.[7]

ASC 350 addresses how acquired intangibles should be accounted for in financial statements, both upon and following their acquisition. It prohibits the amortization of goodwill and some intangible assets, where goodwill is defined as the excess of the purchase price over the fair market value of net assets. The value of any amortized intangibles, those intangible assets that arise from contractual or legal rights or are separable from other assets, must be documented and supported by financial analysis.[8] ASC 805 and ASC 350 effectively require firms to recognize and value intangible assets on an individual basis, in order to provide more relevant and reliable information to investors.

*The FASB accepts three general approaches to intangible asset valuation: the market approach, the income approach and the cost approach.*

Financial valuations begin with the acquisition price and rely primarily on discounted future cash flows and balance sheet analysis. Any excess of the purchase price over the fair value of tangible assets is attributed to intangible assets and/or goodwill. Intangible assets must then be identified and their value separately derived. Any remaining value is classified as goodwill.[9]

subsequent information, especially if it supports a higher royalty rate. In both cases, the court's discretion is designed to reinforce the punitive nature of the damages award.

5 The reporting requirements described here are based on Financial Accounting Standards Board statements. However, by design, they correspond closely to international reporting requirements.

6 Financial Accounting Standards Board (FASB) Business Combinations (revised 2007) Paragraph 3. Retrieved from http://www.fasb.org

7 FASB.(2009). ASC 805 Business Combinations. Retrieved from http://www.fasb.org

8 FASB.(2009). ASC 350 Goodwill Valuations for Financial Reporting. Retrieved from http://www.fasb.org

9 If the sum of fair values of the assets exceeds the acquisition price, the transaction is viewed as a "bargain purchase" and the gain is recorded on the acquiring entity's income statement.

The FASB accepts three general approaches to intangible asset valuation: the market approach, the income approach and the cost approach. In the market approach, intangible asset value is determined by reference to similar assets that have been sold or licensed. If such market transactions can be identified, the terms of those transactions are used to establish the value of the intangible in question. Increasingly, analysts recognize that IP - by its very nature - exhibits unique characteristics and capabilities, and that the probability of identifying truly comparable sales or licenses is low.

Absent reliable market evidence, the intangible may be valued using the income approach. A discounted cash flow model is constructed, based on assumptions regarding growth, profitability, competition, risk, and asset life. The model then calculates the present value of the stream of future profits attributable to the intangible asset in question.

Under the income approach, an intangible asset's value is calculated over its "useful life:" the period of time over which the asset is expected to contribute to the reporting entity's (i.e. the buyer's) cash flows. As long as the asset is contributing or expected to contribute to future cash flows, it will attract a portion of the firm's value. The useful life of patented technology is typically viewed as the remaining life of the patent.

Finally, the cost approach may be used. This approach relies on the principle of replacement cost to estimate asset value, and is typically used to value intangible assets such as engineering know-how or technical drawings. The cost approach implicitly assumes that value is somehow tied to cost. In fact, there is no economic link between the development cost associated with a particular technology and the value it ultimately generates. A cost approach, therefore, is unlikely to yield a correct estimate of value, except in rare circumstances.

## Comparison of the Reasonable Royalty and Financial Reporting Approaches

If the market approach is used to value IP in a financial reporting analysis, there is no reason to believe that the determination of value would differ from a reasonable royalty approach using the same methodology. The difficulty arises when the financial valuation and the reasonable royalty calculation both rely on the income approach.

The financial valuation analysis relies on balance sheet data, while a reasonable royalty calculation typically relies on a profit analysis. This difference in methodologies should not result in different IP values; since corporate assets generate cash flows through time, an asset's value is a stock measure of the discounted cash flows the asset is expected to create. The important distinction between the two approaches is in their respective starting points.

The financial valuation is a "top-down" analysis, in which the market value of the firm is reflected in the acquisition cost. Although the FASB has increased the focus on individual intangible asset identification and valuation, financial reporting analyses are still intended to allocatethetotal acquisition cost across a variety of candidate tangible

*The financial valuation is a "top-down" analysis, in which the market value of the firm is reflected in the acquisition cost* and intangible assets. The firm's purchase price often includes a premium over a value calculated strictly on the basis of expected future profits. This premium reflects a variety of factors, including current stock market conditions, anticipated synergies, majority control and other benefits attributable to the anticipated business combination. Arguably, such a premium should be allocated entirely to goodwill. In practice, however, some portion of this premium may be attributed to the firm's IP.

The reasonable royalty approach, in contrast, represents a purely "bottom-up" analysis. The purpose of the exercise is to determine the value of a particular piece of IP, not of the entire firm. No premium value can be allocated to the IP, because the market value of the firm as a whole has not been determined.

Which analysis correctly assesses the value of the IP? Recall the definition of economic value: it is derived from an asset's ability to generate income. Markets are hypothetically efficient, and in theory a firm's market price should reflect the economic value of its assets. However, the market may experience a temporary shock, or disequilibrium, causing the market value of a public company to rise and fall from day to day. Moreover, bidding wars can emerge for private or public companies, with resulting price spikes. At a particular point in time, therefore, the purchase price may not reflect the true economic value of the underlying assets. Allocating that purchase price to a firm's individual intangible assets may introduce "noise" into the asset valuation, distorting economic value. The difficulty arises because the analytical starting point is the sale of an entire firm, rather than the licensing of an individual asset, notwithstanding the FASB's focus on an asset-by-asset analysis.

*The reasonable royalty approach represents a purely "bottom-up" analysis…. because the market value of the firm as a whole has not been determined.*

Note that the FASB does not advocate the allocation of a purchase price premium to firm IP. Recent changes to business combination accounting requirements were intended to increase the focus on individual intangible asset identification and valuation and to increase transparency in the financial reporting of acquisitions. To the extent that distortions in estimates of IP value occur, they result from firm incentives to attach as much of the purchase price as possible to intangible assets other than goodwill, since goodwill cannot be amortized. Ironically, the increased transparency required by the FASB may increase firm incentives to overvalue intangible assets.

How do these different approaches alter the estimated value of patented technology? If the purchase price includes a market-based premium, the technology may be valued more highly in a financial reporting analysis than in a reasonable royalty calculation.

## Transfer Pricing Approach

For transfer pricing purposes, intangible asset valuation is required in a variety of circumstances. Section 482 of the Internal Revenue Code and the underlying Regulations (commonly referred to as "the U.S. transfer pricing regulations") require that all transfers of tangible and intangible property within a multinational enterprise (MNE) take place under terms that would prevail if the transacting entities were unrelated. An MNE that wishes to license its patented technology to other related entities must determine an arm's-length royalty payment. The arm's-length analysis influences the portion of worldwide income that is earned in each tax jurisdiction, and consequently affects the MNE's global tax liability.[10]

The U.S. transfer pricing regulations define an intangible asset as one that "… has substantial value independent of the services of any individual…" and "derives its value not from its physical attributes but from its intellectual content or other intangible properties." The regulations identify categories of intangible property that closely resemble those in the FASB statements. Implicit in the prescribed transfer pricing valuation methodologies, however, is a focus on non-routine intangibles, or those that allow the company to earn supranormal returns. An intangible is considered valuable and non-routine as long as it generates profits beyond those attributable to routine functions (e.g., distribution and manufacturing). Profits associated with routine intangibles are indistinguishable from returns to routine functions, and consequently cannot be separately valued or transferred. In a transfer pricing context, therefore, only a subset of what constitutes intangible assets for financial reporting purposes is at issue. Patented technology may or may not constitute a valuable, non-routine intangible.

*In a transfer pricing context… only a subset of what constitutes intangible assets for financial reporting purposes is at issue*

U.S. transfer pricing regulations prescribe three methods for determining an arm's-length price for the transfer of intangible property.[11] The regulations direct the taxpayer to select the method that provides the most reliable measure of an arm's-length result. Similar to the market approach in financial valuation, the comparable uncontrolled transaction ("CUT") method may be used if the MNE member licenses comparable intangible property to or from an unrelated party. The taxpayer can evaluate whether or not the intercompany exchange takes place at arm's length by reference to the comparable uncontrolled transaction. Absent such market evidence, transfer pricing regulations direct the MNE to profit-based methods, including the Comparable Profits Method ("CPM") and the Profit Split Method ("PSM"). The frequent lack of comparable market evidence requires that most analyses rely on these latter methods.[12] They begin with the identification of routine functions performed by the firm. Arm's-length returns to these functions are determined by reference to the profits of comparable independent firms. These routine profits are then subtracted from total operating profits and any residual profits are attributed to the intangible(s). If the purpose of the analysis is to determine an arm's-length royalty rate, these residual profits represent appropriate compensation

10 Internal Revenue Service, Department of the Treasury IRC §§1.482-1 through 1.482-8 . Retrieved from http://www.irs.gov. The OECD's Transfer Pricing Guidelines for Multinational Enterprises imposes nearly identical requirements on firms with owned operations in member countries.

11 The discussion refers to Reg. §1.482-47. Reg. §1.482-7 addresses intangible transfers in the context of a cost sharing arrangement (CSA) between related parties. Additional methods (income, acquisition price, and market capitalization) may be applied to evaluate intangible asset transactions pursuant to a CSA.

12 While the PSM can be applied based on evidence from uncontrolled taxpayers, the arm's length analysis typically defaults to a residual profit split.

to the owner of the intangible.[13]

For transfer pricing purposes, the relevant life of an intangible asset is considered to be its "economic" life, or the period of time over which the asset generates supranormal profits. The asset's economic life is shorter than its useful life; its economic life ends when it no longer generates non-routine profits, while its useful life continues as long as it generates profits for GAAP purposes.

On the surface, the transfer pricing approach to IP valuation appears to closely resemble the reasonable royalty approach. The purpose of the exercise is to determine the economic value of a particular non-routine intangible, or piece of IP, not of the entire firm. In addition, absent market evidence (for comparable transactions or established royalty rates), both approaches typically rely on an estimate of future profits attributable to the intangible, rather than a balance sheet analysis. However, the two approaches can generate significantly different results.

First, recall that the transfer pricing analysis begins with operating profits, and then removes profits attributable to routine functions such as manufacturing and distribution. The reasonable royalty approach removes the costs associated with manufacturing (e.g. depreciation, raw materials, labor) and distribution (e.g. sales and marketing expenses), but does not explicitly remove a return to those costs. In this respect, the IP value suggested by the transfer pricing analysis is likely to be lower than the value implied by a reasonable royalty calculation.

Second, the transfer pricing analysis relies upon a shorter "economic life" than the useful life posited in both the financial valuation and reasonable royalty approaches. Assuming identical estimates of future profits associated with the IP, the transfer pricing analysis can generate a lower intangible asset value than a financial valuation or a reasonable royalty analysis.[14]

Third, the transfer pricing analysis returns all of the excess profits attributable to the IP to the intangible asset owner in the form of a royalty. In contrast, the reasonable royalty approach typically divides the value of the IP between the licensor and licensee. This difference will likely decrease the reasonable royalty estimate relative to the transfer pricing royalty.[15]

Finally, while the reasonable royalty approach accounts for feasible non-infringing alternatives available to the licensee, the transfer pricing approach does not. This difference will almost certainly drive the reasonable royalty lower than the transfer pricing royalty, since a reasonable royalty – by definition - shouldn't cost the hypothetical licensor more than the cost of designing around the patent.

## Implications and Conclusions

While tax authorities and practitioners have expressly rejected court-determined damages awards as arm's length evidence of intangible asset value for transfer pricing purposes, companies should not assume that the underlying expert analyses regarding reasonable royalties can be entirely ignored. Experts testify that these analyses represent their best estimates of the value of intellectual property under certain circumstances and at a specific time. By definition, the litigants are unrelated, so any hypothetical negotiation would satisfy the arm's length principle. To the extent that these expert analyses or resulting conclusions regarding reasonable royalties are disseminated publicly, companies may have to explain why their analyses of the same IP for transfer pricing or financial reporting purposes generate different results. Unfortunately, the methodology differences between the reasonable royalty, financial reporting and transfer pricing approaches don't allow for straightforward conclusions as to which approach will generate the highest or lowest estimates of IP value.

In the meantime, what are the implications of disparate valuation analyses? First, litigants may try to introduce either financial or transfer pricing IP valuations in an effort to discredit their adversaries, and/or as evidence of the firm's "true" view of the value of the disputed patent.[16] Second, investors, financial regulators or tax authorities may examine the litigation history of the firm and attempt to use accessible information regarding reasonable royalty analyses as evidence of IP value in a tax or financial context. A coordinated approach to IP analysis can reduce inconsistencies, but cannot eliminate them. To the extent that firms and practitioners can manage the preparation, dissemination and clarification of these analyses, they may avoid costly misinterpretations of the results.

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13 In the case of multiple affiliate contributors to the development of valuable non-routine intangibles, the residual profits will be allocated according the relative size of the contributions.

14 If the likelihood of rapid technological advance is "built in" to the reasonable royalty calculation, its impact on cash flows would be to reduce the expected infringer profits attributable to the technology, thereby reducing the treasonable royalty. This would offset the longer life assumed in the calculation and lower the implied value of the IP.

15 Only in rare cases will the profit division reflect the division between routine returns and returns to non-routine intangibles implicit in the transfer pricing analysis, causing the two analyses to converge.

16 While these analyses are typically protected by attorney-client privilege, relationships in the technology world are complex. For example, in spite of the recent case and ongoing litigation worldwide, Apple continues to purchase components from Samsung.