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HIGHLIGHTS

Penalty Avoidance Revenue Procedure Does Not Conflict with §6662 Rules
Large taxpayers that disclose potential issues to the Internal Revenue Service under a 1994 revenue procedure must still keep contemporaneous documentation to avoid Section 6662 penalties, Deputy Associate Chief Counsel (International Technical) Steven Musher clarifies. The revenue procedure permits large taxpayers to avoid penalties if they show additional tax due or alert the IRS to the items on an amended return. **Page 183**

Group Urges Changing OECD Draft on PEs to Reflect Issues Banks Face
The Organization for Economic Cooperation and Development should modify a draft discussion paper on permanent establishments to allocate capital based on function, give greater priority to risk management, and emphasize functional analyses in allocating profits, the Institute of International Bankers says. **Page 190**

India's Final Rules May Allow Ranges; Office for Foreign Firms Planned
India expects by the end of July to release final transfer pricing regulations that may permit a range of acceptable results rather than an arithmetic mean as proposed in the draft rules, an official says. The government also is considering some form of transfer pricing safe harbor. . . . The country's Central Board of Direct Taxes plans to establish a separate office to oversee tax compliance by multinational companies. The new office will supervise an anticipated boost in transfer pricing-related assessment cases. **Page 189**

ANALYSIS

Buy-Ins: Analysis of Market Capitalization and Declining Royalty Methods
Brian Becker of Criterion Finance LLC analyzes two cost sharing buy-in calculation methods and concludes that both the market capitalization approach and the declining royalty method are sound when applied correctly. **Page 195**

IN PRACTICE

The Arm's-Length Royalty Rate when a Service Subsidiary is Created
Jeffrey I. Rosenblum of Andersen in Roseland, N.J., says a parent company should pay all of the affiliate's costs as well as a markup when it creates a subsidiary to handle a specific function, such as contract manufacturing, contract research and development, sales and marketing, distribution, or administrative support. **Page 198**

ALSO IN THE NEWS

APPEALS: The U.S. Court of Appeals for the Eleventh Circuit's decision in *United Parcel Service of America Inc. v. Comr.* helps to define "business purpose" within the meaning of the economic substance doctrine, practitioners say. **Page 185**

BRAZIL: Brazil eases procedures for obtaining relief from statutory minimum profit margins as part of a consolidation of its transfer pricing rulings, decrees, and regulations. The changes, effective April 3, also revise documentation requirements and expand a safe harbor provision for certain export transactions. **Page 191**

POSSESSIONS CORPORATIONS: A taxpayer qualifying for the benefits of both Section 936(h) and the now-repealed foreign sales corporation provisions must apply the FSC provisions before the Section 936(h) profit split provisions, the IRS National Office advises. **Page 183; Text, Page 192**

SECTION INDEX

 ISSN 1063-2069

Analysis

Further Thoughts on Cost Sharing Buy-Ins: The Market Capitalization and Declining Royalty Methods

BY BRIAN C. BECKER *

Valuing intangibles in the cost sharing buy-in context continues to be contentious. Much of the literature and criticism has focused on the applicability of two methods in particular: the market capitalization approach, which has several variations, and the so-called declining royalty method.

Analyzing arguments on either side of this debate, this article concludes that the market capitalization method is fundamentally sound and the declining royalty method also is theoretically sound. Both should produce appropriate and bias-free results when applied correctly. However, both methods are often misapplied, leading to inappropriate results.

Summary of Two Common Methods

With both the market capitalization method and the declining royalty method, the general fact pattern is of a foreign subsidiary[1] that historically has paid a royalty for the use of intangibles owned by the domestic parent. The foreign subsidiary will discontinue such royalty payments by making:

- an intangible buy-in payment; and
- ongoing cost sharing payments.

In essence, the subsidiary is purchasing its (geographic) share of the intangibles (finished and in-process) that exist as of the date of the buy-in and agreeing to pay its pro-rata share of further development costs.

The market capitalization method is theoretically applied in this manner:

- adding the company's market capitalization (product of the market price and number of outstanding shares) to the company's liabilities to arrive at its "enterprise" value;
- subtracting the values of all tangible and non-transferred intangible assets[2] from the enterprise value to compute the worldwide value of the transferred intangible; and
- multiplying the worldwide value for the transferred intangible by the portion of the world (based on relative benefit)[3] being purchased to determine the appropriate buy-in value.

The declining royalty approach also requires the subsidiary to incur ongoing cost sharing payments after the buy-in payment, but its buy-in payment structure takes on a different form of payment than that seen under the market capitalization approach. Instead of having the subsidiary pay a lump sum fee, this approach requires the subsidiary to make annual royalty payments throughout the "useful life" of the intangible being transferred. The declining royalty method theoretically would determine the royalty payment during any specific year of the transferred intangible's useful life by:

- defining the royalty rate being paid before the cost sharing arrangement[4] as the "baseline" royalty rate for the use of such intangibles;
- determining the portion of the transferred intangibles' (expected) *value* in the year in question that was developed before the cost sharing agreement; and
- multiplying the pre-cost sharing agreement value portion by the baseline royalty rate to calculate the royalty rate for the year in question. This exercise is repeated for each year that makes up the intangible's useful life.[5]

[1] The fact pattern need not involve the transfer from the U.S. parent to a foreign subsidiary—it also could take the other direction. Typically, however, a foreign subsidiary buys the rights to the intangibles for a wide geographic area and relicenses the intangibles outside of its home country (that is, it acts as a hub for a geographic area).

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[2] It is particularly important to make reasonable estimates of the value of non-transferred intangible assets or the remaining value of the transferred intangibles may be inappropriate. For example, it is generally not appropriate to value the non-transferred intangibles as a "cost of capital" markup on development costs unless the markup accounted for the risks incurred at each stage of development. This process—which the author has seen applied before—tends to overvalue the transferred intangible.

[3] The benefit can be defined in a number of ways, including sales, operating profit, incremental sales or intangible profit. The portion applied in the buy-in is typically the initial portion applied to the sharing of future development expenditures.

[4] The pre-cost sharing agreement royalty must be arm's length to use it as a baseline. If it is not or there is no such royalty payment (for example, the transferred intangibles have not yet let to commercial sales), an arm's-length rate must be used to set this baseline.

[5] The buy-in royalty to be paid across any one year would likely be the average of the beginning and ending year calculations of this royalty.

Split Among Practitioners

Economists continue to disagree about the appropriateness of these two methods. The critiques leveled on the market capitalization method have generally focused on its theoretical foundation and have been unfounded. Relatively little specific criticism has been leveled on the declining royalty method, but the criticism—directed toward its misapplication—has typically been on point.

Most of the criticism in this area has been directed towards the theory of market capitalization. A recent article by economists and an attorney from Ernst & Young LLP [6] on the market capitalization method argues that:

- it is too difficult to separate out the values of the various types of intangibles owned by the parent; and
- the market capitalization of the firm includes current and expected future intangibles, while the buy-in should only include current intangibles.

Baker & McKenzie attorneys and an economist[7] also have criticized the market capitalization method, although not quite as severely. Their article points out that a company's market value can show wide swings over short periods of time for reasons independent of the value of transferred intangibles. Further, they mention that the market capitalization may overstate firm value during periods when the market is in a "bubble."

An Arthur D. Little Inc. economist voiced additional criticism by implying that the market capitalization essentially requires the subsidiary to pay twice for future intangibles.[8]

Declining Royalty Criticism

The declining royalty method also has faced some detractors. A Horst Frisch Inc. economist found this approach flawed, as:

- it does not allow for the possibility that the intangibles become more valuable after the cost sharing agreement; and
- it typically phases out the royalty too quickly.[9]

An earlier article by this author criticized the typical application of the declining royalty method for implying too large a share of value to post-cost sharing agreement development expenditures.[10] The analysis, which observed that earlier stage development expenses are generally riskier and require a higher rate of return than later stage development expenses due to lower success probabilities, is mirrored in a standard valuation textbook. The quotation below was taken from a chapter in that book written by a PricewaterhouseCoopers' practitioner:[11]

> The actual rate of return selected should consider how far along the development is and the perceived confidence of success or failure. If the product is embryonic, the rate of return might well be as high as 50 percent after tax. If the IPRD [in-process research and development] is just an improvement on an existing well-established product line, then rates of return should probably be pegged at the firm's cost of capital plus a premium depending on the perceived additional risk.

Other potential problems with the declining royalty approach include high levels of speculation/estimation and inappropriate fact patterns. It is difficult and speculative at the time of the buy-in to estimate the portion of the intangibles' value that will be created in future years. One can project development expenses (or actual expenditures, when the valuation is conducted ex-post), but these cannot translate to value without incorporating hard-to-estimate probabilities of commercial success at each stage of development.

This problem, however, can be avoided somewhat by tying the decline in royalty rate to relative sales (profits) of three different types of products:

- those fully developed before the agreement;
- those partially developed at the time of the agreement; and
- those where development began after the agreement. [12]

It also is difficult to estimate the useful lives of certain intangibles, including goodwill and core technology. In addition, the analysis becomes especially complicated when numerous intangibles are being transferred and relative values must be determined to estimate weighted average useful lives.

The declining royalty method becomes complicated when the finished and in-process intangibles are very different. For example, if a subsidiary paid 8 percent royalties on an over-the-counter pharmaceutical before the buy-in, but the principal value in the buy-in was for a patent for a potential blockbuster pharmaceutical (that is, an eventual royalty of 35 percent), it would be difficult or impossible to apply this method without significant adjustment. In other words, it is inappropriate to have a royalty declining from a base of 8 percent as payment for an intangible that may have a value consistent with a 35 percent royalty.

Unfounded Criticisms of Market Capitalization

The market capitalization method has endured the bulk of the criticism on three theoretical grounds. All three primary criticisms are unfounded or overstated. While any method is subject to application error,[13] the market capitalization method is theoretically sound.

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[6] Faiferlick, Christopher; Ackerman, Robert; Wills, John; and Reichert, Timothy, "Market Capitalization: Not a Reliable Transfer Pricing Method" (9 *Transfer Pricing Report* 753, 02/21/01).

[7] Levey, Marc; Miesel, Victor; and Garofalo, William, "Buy-In, Buy-Out Requirements Present Unusual Difficulties for Cost-Sharing Agreements," Prepared for Baker & McKenzie's 16th annual Asia Pacific Tax Conference in Singapore, November 2000.

[8] Comments of Irving Plotkin (9 *Transfer Pricing Report* 196, 07/26/00).

[9] Comments of Daniel Frisch (9 *Transfer Pricing Report* 195, 07/26/00).

[10] Becker, Brian, "Valuing In-Process R&D for Acquisitions: Economic Principles Applied to Accounting Concepts" (9 *Transfer Pricing Report* 323, 9/20/00).

[11] See Gooch, Lawrence, "In-Process R&D," Chapter 9, pp. 188-89, in *The Handbook of Advanced Business Valuation*, McGraw-Hill, 2000.

[12] Such an approach also would need to value core technology and goodwill. Formal analysis of this version of the declining royalty approach is outside the scope of this article.

[13] By contrast, there have been some valid criticisms raised regarding the application of the market capitalization method. For example, the non-transferred intangibles can be undervalued (thereby overvaluing the transferred intangibles) by treat-

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The first criticism focuses on application difficulty because it is hard to determine the values of the non-transferred intangibles. However, even an imprecise calculation can serve as an order-of-magnitude test of reasonableness.[14] Further, for many companies' product lines, the application is fairly straightforward, as all of their valuable intangibles are being transferred.

The criticism that a company's market value varies too much and/or is not indicative of its value has no foundation. A company's value varies because the expectations of its future profits are updated all of the time, as changes in the economy, industry, or company are processed into the minds of buyers and sellers in the market. With no one aiming a gun at the head of either buyers or sellers in the public markets, it is hard to argue against the market price for a company being indicative of the price that would be seen between unrelated parties.

The logic in the final criticism is difficult to see: the current market value of a company includes "future" intangibles. Thus, the critics argue, a market capitalization approach leads to double payment for the same future intangible (buy-in and cost sharing payments). The current market value of a company, however, does *not* include the value of future intangibles. It simply includes the discounted expected product value (based on commercial success probability and time value of money) of the work-in-process intangibles.

In the future, that expectation of commercial success may turn out to be either too high or too low, and the market value will adjust as seen in the table below:[15]

Date	Probability of Commercial Success (i.e., $100 million profit)	Market Capitalization
June 1, 2001	50%	$300 million
June 1, 2003	0%	$250 million
June 1, 2003	100%	$350 million

The simplified example above shows how the market can adjust to the successful or unsuccessful development of an intangible. Today, the market assigns $50 million of value to this work-in-process intangible due to its 50 percent chance of generating $100 million in profits. If the development concludes without creating any commercial sales, the value of the company drops by $50 million. Similarly, if the development generates a profit of $100 million with certainty, the market adjusts upward by an additional $50 million.

Conclusion

No agreement has been reached regarding intangible property valuation methods for cost sharing buy-ins. The market capitalization and declining royalty methods, however, appear to be the most commonly employed and discussed at this point. Both methods have been criticized. But most of the criticism has been directed toward the market capitalization method. Neither method is necessarily superior to the other in all situations. However, the criticism leveled against the theory of these methods (principally market capitalization) is unfounded, and both methods can produce bias-free results when applied correctly in appropriate situations.

ing them as a modest markup on their development expenses.

[14] For example, the market capitalization can be used to test the implications of the results of another method. That is, if a declining royalty method calculated that the transferred intangibles are worth 2 percent of the company's total enterprise value, it is reasonable to examine whether the tangible assets and the non-transferred intangibles could realistically be worth the remaining 98 percent.

[15] The example in the table is simplified to assume no other changes in the company or market during the development period (June 1, 2001, through May 30, 2003.) This table also is simplified by not considering the time value of money.