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IRS PROPOSED TRANSFER PRICING REGULATIONS

By Stuart Webber
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Abstract

Over the past decade many US Multi-National Enterprises (MNEs) have reduced their worldwide tax rate, using Cost Sharing Agreements (CSAs) to transfer intellectual property to tax havens. The US Internal Revenue Service (IRS) has questioned whether taxpayers have made these transfers at arm's-length values. In August, 2005 the IRS proposed new transfer pricing regulations to govern CSAs. These regulations propose an "investor model" to value contributions of pre-existing intellectual property to CSAs. The regulations aim to value intellectual property contributions to a CSA using the same approaches employed by investors, using time value of money concepts. If implemented, these proposed regulations will likely increase transfer prices paid for intangible assets. The purpose of this paper is to explain the proposed regulations, identify key issues with them, and to determine if the IRS proposed regulations actually model an investor's approach to intellectual property valuation. This paper demonstrates the proposed regulations do not support the arm's length standard, and are inconsistent with the way in which third-party investors would structure such investments.

Valuing Intellectual Property

Intellectual property is a key factor in business success. Intellectual property includes patents, copyrights, trademarks, and other intellectual know-how associated with development of technologically advanced products. Intellectual property development is the most important business activity in many sophisticated business sectors, such as software development and pharmaceuticals. Valuable intellectual property can create sustained superior earnings, so the stakes are high. As an indication of the growing importance of intellectual property, there is an emerging market for businesses that buy and sell intellectual property.[1]

Intellectual property development can be viewed in two distinct ways, one geographic, and one legal. A geographic perspective focuses upon the physical location scientists, engineers, and marketers develop intellectual property. For example, Silicon Valley is known to be the location where many high-technology products are developed. A legal perspective focuses upon where that property is owned, protected and taxed.

American-based Multi-National Enterprises (MNEs) are the primary focus of this paper. The new regulations are primarily aimed at these businesses. American businesses have historically initiated development of intellectual property within US geographic borders. US intellectual property laws have protected and taxed profits generated from these assets. The geographic and legal views of intellectual property development are identical at this time. As US firms have expanded abroad, they have often drawn upon the talents of scientists, engineers, and marketers in overseas locations to develop intellectual property. From a geographic perspective, the intellectual property is developed in several locations, but it has generally been owned, protected and taxed by US laws. Companies typically provide an arm's-length markup for services provided by overseas subsidiaries to fund development, record profits and pay taxes in each jurisdiction.

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[1] As an example, Microsoft's former chief technology officer, Nathan Myhrvold, recently formed a company, Intellectual Ventures, to acquire and sell patents. See "Invention Shop or Troll Factory?" Financial Times, page 11, April 26, 2006

Cost Sharing Agreements (CSAs) were introduced as an option to this model in 1968. In CSAs two or more affiliated legal corporations share intellectual property development costs. According to the 1968 treasury regulations CSAs need to reflect "an effort in good faith by the participating members to bear their respective shares of all costs and risks of development on an arms-length basis."[2]

These regulations further state: "where a member of a group of controlled entities acquires an interest in the intangible property as a participating party in a bona fide cost sharing arrangement with respect to the development of such intangible property, the (IRS) shall not make allocations with respect to such acquisition except as may be appropriate to reflect each participant's arm's length share of the costs and risk of developing the property…"[3] No explicit direction was given concerning compensation for pre-existing intangible assets, but the arm's-length standard was the standard valuation principle.

The Tax Reform Act of 1986 introduced the "commensurate with income" standard, a key modification to US transfer pricing law. Congress believed businesses transferred intellectual property abroad with inadequate compensation, and there were few effective ways to value these transfers. For that reason the following statement was added to IRS §482: "In the case of any transfer (or license) of intangible property…the income with respect to such transfer or license shall be commensurate with income attributable to the intangible."[4] In other words, the price paid for the property must be related to the income earned from it. The relative importance of these two standards, "arm's-length" and "commensurate with income," plays an important part in US transfer pricing law to this day.

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[2] 1968 Regs. §1.482-2(d)(4)
[3] Ibid
[4] IRS §482

Current Regulations

Current regulations governing Cost Sharing Agreements were issued in 1995. A Cost Sharing Agreement is a contract between two or more parties to share the costs of developing intangible property in proportion to the benefits earned by each participant.[5] Participants share costs, but profit separately from the intellectual property created.

Intangible Development Costs include all operating expenses, and an arm's length charge for property made available to the CSA.[6] The regulations were modified in 2003 to state specifically that the value of stock-based compensation, such as stock options, must be included in the Cost Sharing Agreement.[7] This issue was litigated in a recent case, Xilinx Inc. v. Commissioner, which will be discussed later in this paper.[8]

According to the regulations, costs must be shared in proportion with "Reasonably Anticipated Benefits."[9] Reasonably Anticipated Benefits are defined as "the aggregate benefits that (the controlled taxpayer) reasonably anticipates it will derive from covered intangibles."[10] Benefits are "additional income generated or costs saved by the use of the covered intangibles."[11] A CSA participant's Reasonably Anticipated Benefits share equals its Reasonably Anticipated Benefits, divided by the sum of all participants' Reasonably Anticipated Benefits. The current regulations state "the most reliable estimate of Reasonably Anticipated Benefits" should be used to measure a controlled participant's share of those benefits.[12]

Reasonably Anticipated Benefits may be measured directly or indirectly. Under the regulations, it is preferable to measure the profits directly earned by the intangible asset. However it is

[5] Regs. §1.482-7(b)(1)-(4)
[6] Regs. §1.482-7(d)(2) and §1.482-2(c)
[7] Regs. §1.482-7(d)(2)(i)
[8] Xilinx Inc. v. Commissioner (125 T.C. No. 4) 8/30/05
[9] Regs. §1.482-7(f)(1)
[10] Regs. §1.482-7(e)(2)
[11] Regs. §1.482-7(e)(1)
[12] Regs. §1.482-7(f)(3)(i)

frequently difficult to measure precisely the profit generated by an intangible asset. In most cases taxpayers use an indirect measure of profit, such as units sold, to estimate the profit generated by an intangible asset. [13]

Related taxpayers make equalizing payments to share costs proportionately with Reasonably Anticipated Benefits. For example, suppose Taxpayer X expects to receive 60% of the benefits from the intangible assets created. It should absorb 60% of the costs. If that organization locally spends $1.1M per year developing intangible assets, while Taxpayer Y spends $900K per year developing the same intangible assets, X needs to make an equalizing payment of $100K to Y, to apportion costs with Reasonably Anticipated Benefits. Once that payment is made, X bears 60% of the costs, and Y absorbs the remaining 40%.

Table I	Taxpayer X	Taxpayer Y
Local Spending	$1,100,000	$900,000
Equalizing Payment (Receipt)	$100,000	($100,000)
Net Cost	$1,200,000	$800,000
Reasonably Anticipated Benefits	60%	40%

However once the intangible assets are created, organizations exploit the benefits of those assets separately. Actual benefits will differ from Reasonably Anticipated Benefits.

The 1995 regulations explicitly state other participants must compensate organizations for intangible asset contributions to the CSA. This compensation is known as a “buy-in” payment. The regulations state: “a controlled participant that makes intangible property available to a QCSA (Qualified Cost Sharing Agreement) will be treated as having transferred interests in such

[13] See Audit Checklist, Doc. Set Four, directing IRS examiners to test Reasonably Anticipated Benefit shares against actual results.

property to the other controlled participants, and such other controlled participants must make buy-in payments to it."[14]

The buy-in payment should equal "the arm's length charge for the use of the intangible under the rules of Regulations §1.482-1 and §1.482-4 through §1.482-6, multiplied by the controlled participant's share of Reasonably Anticipated Benefits."[15] These payments can be one-time payments, installment payments, or royalties.

Suppose taxpayers X, Y and Z form a Cost Sharing Agreement. Based upon Reasonably Anticipated Benefits, they agree to share costs 40%, 35%, and 25% respectively. Taxpayer X contributes a pre-existing intangible asset worth $80K to the CSA. X should receive $48K from the other two participants. Y needs to make a $28K payment (35% of $80K), and Z should make a $20K payment (25% of $80K) to taxpayer X.

Table II	Taxpayer X	Taxpayer Y	Taxpayer Z
Value of Intangible Asset Contributed	$80,000	$0	$0
Payment Made (Received)	($48,000)	$28,000	$20,000
Net Cost	$32,000	$28,000	$20,000
Reasonably Anticipated Benefit Share	40%	35%	25%

The regulations state that if a participant "bears costs of intangible development that over a period of years are consistently and materially greater than its share of Reasonably Anticipated Benefits, then the (IRS) may conclude that the economic substance of the agreement …is inconsistent with the terms of the cost sharing arrangement." [16] The IRS "may disregard such terms and impute an agreement consistent with the controlled participant's code of conduct, under which a controlled participant that bore a disproportionately greater share of costs received

[14] Regs. §1.482-7(g)(1)
[15] Regs. §1.482-7(g)(2)
[16] Regs. §1.482-7(g)(5)

additional interests in covered intangibles."[17] In other words, the IRS can revalue the buy-in, and charge the taxpayer with additional taxes, interest, and sometimes penalties. Given the high sums involved, taxpayers frequently litigate these issues.

Concern with Current Regulations

Since the current regulations were enacted American-based MNEs have increasingly used CSAs to transfer intellectual property abroad. The IRS is concerned that buy-ins (which are called Preliminary or Contemporaneous Transactions, or PCTs, in the proposed regulations) are under-valued by US taxpayers. An IRS spokesman recently said: "Intellectual property is a special case that may be difficult to value. The IRS is concerned that intellectual property is valued according to the arm's length standard, and actively audits and contests transfers that do not meet this standard."[18] As an example, in April, 2006 the software firm Symantec received a $1 billion tax bill for software licenses transferred to its Irish subsidiary, stemming from a dispute over the value of those assets.

To address such issues, the IRS proposed new transfer pricing regulations in August, 2005. The regulations' preamble elaborates upon the IRS's concern. "Experience in the administration of existing §1.482-7 has demonstrated the need for additional regulatory guidance to improve compliance with, and administration of, the cost sharing rules. In particular, there is a need for additional guidance regarding the external contributions for which arm's length consideration must be provided as a condition of entering into the CSA."[19] According to the IRS, the new regulations are meant to support the arm's-length transfer pricing standard.

Tobin (2006) states the regulations have been motivated by the perception that current CSA regulations have allowed taxpayers to undervalue buy-in transactions. Tobin writes "The IRS has been especially concerned that taxpayers, through the buy-in component of CSAs, have been

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[17] Ibid
[18] "Wearing of the Green: Irish Subsidiary Lets Microsoft Slash Taxes in U.S. and Europe," The Wall Street Journal; November, 7, 2005, page 1
[19] Preamble to Proposed Regulations, 70 Fed. Reg. 51115, page 5 (8/29/05)

transferring intangible assets outside the United States for less than arms-length consideration" (p. 31). The Tax Executives Institute (2005) agrees this is the IRS's concern, writing "new rules proceed from an assumption that taxpayers use cost sharing abusively to disguise the transfer of intellectual property outside the United States to an affiliate (often located in a tax haven) at a value substantially less than the fair market value of the property" (p. 3).

The regulations remain proposals for three years, and do not apply during this period. Taxpayers can provide feedback and the IRS may modify the regulations. The regulations may become effective in 2008.

Need for New Regulations

The IRS believes new cost sharing regulations are necessary based on experience administering current rules. It believes CSAs are unlike any other business arrangements. This makes the search for arm's-length transfer prices pointless. The IRS also believes it lacks the information necessary to govern CSAs effectively. Thus it has determined new regulations are necessary.

To explain the unique features of CSAs, the IRS states in the preamble to the proposed regulations:

> "This guidance is necessary because of the fundamental differences in cost sharing arrangements between related parties as compared to any superficially similar arrangements that are entered into between unrelated parties. Such other arrangements typically involve a materially different division of costs, risks, and benefits than in cost sharing arrangements under the regulations. For example, other arrangements may contemplate joint, rather than separate, exploitation of results, or may tie the division of actual results to the magnitude of each party's contributions (for example, by way of preferential returns). Those types of arrangements are not analogous to a cost sharing arrangement in which the controlled participants divide contributions in accordance with Reasonably Anticipated Benefits from separate exploitation of the resulting intangibles."[20]

[20] Preamble to Proposed Regulations, 70 Fed. Reg. 51115, pages 6-7 (8/29/05)

If CSAs are indeed unique business arrangements, the search for comparable transfer prices becomes impossible. If there are no similar business structures, there are no comparable uncontrolled transactions, and thus no relevant transfer prices. The IRS apparently believes valuing intellectual property is difficult primarily due to the CSA structure, not the inherent difficulties valuing intellectual property.

The IRS also believes it lacks information available to the taxpayer. The IRS faces "an asymmetry of information vis-à-vis the taxpayer. The taxpayer is in the best position to know its business and prospects. The Commissioner faces real challenges in ascertaining the reliability of the ex ante expectations of taxpayer's initial arrangements in light of significantly different ex post outcomes…" [21] Lacking high-quality information, the IRS may believe a taxpayer has structured an arm's-length buy-in. Years later, it may become apparent the price paid was inadequate. At that late date the statute of limitations may apply, and the IRS may be legally prevented from taking action.

The IRS proposes an "investor model" to value intellectual property. The IRS believes it needs a new approach, since it lacks comparable transfer prices and adequate information. An investor model can address these issues, according to the IRS. In its view, investors evaluate business opportunities based upon profit expectations, and attempt to maximize their return by selecting investments with the highest risk-adjusted returns. Controlled taxpayers should adopt the same perspective when analyzing CSAs. The preamble to the proposed regulations states: "Under this model, each controlled participant may be viewed as making an aggregate investment, attributable to both cost contributions (ongoing share of intangible development costs) and external contributions (the preexisting advantages which the parties bring into the arrangement)…In this regard, valuations are not appropriate if an investor would not undertake to invest in the arrangement because its total anticipated return is less than the total anticipated

[21] Preamble to Proposed Regulations, 70 Fed. Reg. 51115, page 58 (8/29/05)

return that could have been achieved through an alternative investment that is realistically available to it.” [22]

Key Regulatory Changes

Maximizing tax revenue is a key IRS objective. The proposed regulations support this goal. To increase tax revenue, the IRS has proposed a number of important changes to CSAs, designed to increase CSA buy-ins, and thus taxes raised.

Under the new regulations, CSA participants obtain permanent rights to intellectual property in a "Reference Transaction." In contrast, the current regulations do not require permanent transfers. Under current rules, CSA participants have imposed time limitations on intellectual property transfers, reducing their value. As the preamble to the regulations states:

> “The concept of the RT (Reference Transaction) was developed in response to arguments that have been encountered in the examination experience of the IRS under existing regulations. In numerous situations taxpayers have purported to confer only limited availability of resources or capabilities for purposes of the intangible development activity (IDA) under a CSA. An example is a short-term license of an existing technology. Under the existing regulations, such cases may, of course, be examined to assess whether the purported limitations conform to economic substance and the parties’ conduct…In addition, even if short-term licenses were respected, the continued availability of the contribution past the initial license term would require new license terms to be negotiated taking into account relevant factors, such as whether the likelihood of success of the IDA had materially changed in the interim. The proposed regulations address the problems administering such approaches more directly by requiring an upfront valuation of all external contributions which would be more difficult to calculate if it involved the valuation of a series of short-term licenses with terms contingent on such interim changes. Accordingly, the proposed regulations assume a reference transaction that does not allow for contingencies based on the expiration of short-term licenses that might require further renegotiation of the compensation for the external contribution.” [23]

In other words, the intellectual property transfers must be permanent. Taxpayers cannot reduce buy-ins by limiting license duration.

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[22] Preamble to Proposed Regulations, 70 Fed. Reg. 51115, page 7 (8/29/05)
[23] Preamble to Proposed Regulations, 70 Fed. Reg. 51115, pages 18-19 (8/29/05)

Similarly, the proposed regulations require that CSA participants divide their markets permanently into non-overlapping geographies. Current regulations impose no such requirement. Kochman (2005) writes, "The IRS apparently believes that separate exploitation is not possible without exclusive rights, and without separate exploitation reasonably anticipated benefits cannot be estimated" (p. 3). The IRS's intention may also be to increase the value of the buy-in. Taxpayers have apparently argued that the US-based entity may later compete with other CSA participants, and this risk reduces the value of the intellectual property transfer. The geographic restriction also may be designed to allocate the lucrative American market to the US CSA participant. The proposed regulations consistently allocate that market to the US entity.

The new regulations grant the IRS the sole right to make adjustments to the CSA, to align costs with benefits. If the actual returns earned by certain taxpayers fall outside an acceptable range determined by IRS, it is empowered to change the agreements. The proposed regulations state: "Because the guidance on periodic adjustments is intended to address the problem of information asymmetry, and because it is exceeding unlikely that a taxpayer would use information asymmetry for anything other than a tax-advantaged result, periodic adjustments of this type can only be exercised by the Commissioner."[24] These changes can include adding or removing costs from the Intangible Development Costs, changing shares for the CSA participants, or assigning unallocated territorial interests to participants. In other words, if the US taxpayer undervalues the buy-in, the IRS is empowered to make whatever changes it determines necessary to revalue it, and increase US tax revenue. But if the US taxpayer overvalues the intellectual property buy-in, that valuation stands.

The regulations suggest ways the taxpayer can protect himself from IRS adjustments. The regulations state taxpayers can forecast future results more accurately. Taxpayers can also use superior information to value buy-ins reasonably, rather than produce tax-advantaged results. As the IRS states, taxpayers should adopt "an arrangement that appropriately reflects the profit potential and risks associated with an intangible transfer, which it is in the best position to

[24] Preamble to Proposed Regulations, 70 Fed. Reg. 51115, page 58 (8/29/05)

evaluate in an economically realistic way."[25] Furthermore, the regulations propose a range of acceptable returns that will not be revalued.

The IRS also suggests taxpayers consider contingent payment terms, as opposed to fixed payment terms, which are unrelated to actual performance. Contingent payments, based upon actual profits or other actual results, reduce the risk that intellectual property is improperly valued. The IRS states: "the uncertainty in valuing intangible property might lead them to adopt from the outset contingent terms of different varieties and degrees that allow for adjustment in light of actual profit experience. "[26]

The Investor Model

To address concerns that intellectual property is improperly valued, the IRS proposes an investor model to value intangible asset transfers. The investor model employs present value concepts drawn from finance. This model marks a significant departure from current transfer pricing law.

Introducing the investor model, the IRS states:

> "Under the (investor) model, each controlled participant may be viewed as making an aggregate investment, attributable to both cost contributions (ongoing share of intangible development costs) and external contributions (the preexisting advantages which the parties bring to the arrangement), for purposes of achieving an anticipated return appropriate to the risks of the cost sharing arrangement over the term of the development and exploitation of the intangibles resulting from the arrangement. In particular, the investor model frames the guidance in the proposed regulations for valuing the external contributions that parties at arm's length would not invest, along with their ongoing cost contributions, in the absence of an appropriate reward. In this regard, valuations are not appropriate if an investor would not undertake to invest in the arrangement because its total anticipated rate of return is less than the total anticipated return that could have been achieved through an alternative investment that is realistically available to it." [27]

The IRS proposes five methods to value intellectual property contributions, all supporting its investor model. Three of the methods are new: the Income Method, the Acquisition Price

[25] Preamble to Proposed Regulations, 70 Fed. Reg. 51115, pages 58-59 (8/29/05)
[26] Preamble to Proposed Regulations, 70 Fed. Reg. 51115, page 59 (8/29/05)
[27] Preamble to Proposed Regulations, 70 Fed. Reg. 51115, page 7 (8/29/05)

Method, and the Market Capitalization Method. The Residual Profit Split Method is retained; however changes are proposed to make it consistent with the investor model. The regulations preserve the Comparable Uncontrolled Transaction (CUT) method. Finally, a sixth unspecified method is permitted by the IRS, but it must be consistent with investor model principles.

The "best method rule" states taxpayers should select a method that best reflects the arm's-length standard, based on facts and circumstances. The form of payment can be a lump-sum payment, or a royalty, based on either sales or profit.[28]

Of the five methods proposed, two are expected to be used frequently. The Income Method applies when only one taxpayer contributes pre-existing intellectual property to a CSA. When two or more taxpayers make external contributions to CSAs the Residual Profit Split Method is used. Observers expect taxpayers will use these methods more frequently than the other three methods infrequently, since these latter methods derive values from market transactions, which are unlikely to be frequent.

There is an overriding valuation investor model principle, applicable to all methods. The regulations state: "The valuation of the amount charged in a PCT (buy-in) must be consistent with the assumption that, as of the date of the PCT, each controlled participant's aggregate net investment in developing cost shared intangibles pursuant to the CSA, attributable to both external contributions and cost contributions, is reasonably anticipated to earn a rate of return equal to the appropriate discount rate…over the entire period of developing and exploiting the cost shared intangibles." [29] In other words, taxpayers should plan to earn a risk adjusted rate of return.

[28] Prop. Regs. §1.482-7(g)(2)(ix)
[29] Prop. Regs. §1.482-7(g)(2)(viii)

Investor model valuation extends "over the entire period of developing and exploiting the cost shared intangibles."[30] Technologically advanced products often lead to enhanced and improved versions. When the intangible assets lead to development of further intangibles "then the period in the preceding sentence includes the period of developing and exploiting such indirectly benefited intangibles."[31] Given that one product frequently leads to further versions, it is possible CSAs will extend long into the future, conceivably in perpetuity.

As a result, the returns earned by CSA participants not contributing pre-existing intellectual property will be limited for many years. The regulations do not permit declining royalty rates over the life of the CSA. The profit earned by such participants is limited to "the appropriate discount rate over the entire period of developing and exploiting such indirectly benefited intangibles."[32]

During the life of the CSA, the taxpayer is responsible for updating and monitoring results, calculating returns, and updating documentation. Not complying with these requirements narrows the band of acceptable returns, and increases the likelihood of IRS adjustments.

Income Method

As mentioned, the IRS identifies five acceptable Investor Model methods. The first is the Income Method, and this method is expected to be used regularly. The Income Method should be used when only one CSA participant contributes pre-existing intellectual property to the CSA. The buy-in is determined by analyzing a participant's realistic alternatives to a CSA.[33] The proposed regulations state: "the arm's length charge for a PCT payment will be an amount such that a controlled participant's present value, as of the date of the PCT, of entering into a CSA

[30] Ibid
[31] Ibid
[32] Prop. Regs. §1.482-7(g)(2)(viii)(B)(iv)
[33] Prop. Regs. §1.482-7(g)(4)

equals the present value of its best realistic alternative."[34] The regulations propose two ways the income method can be applied. One focuses upon options available to the organization transferring intellectual property to the CSA, called the PCT Payee. The second focuses upon the realistic alternatives available to the organization not transferring intellectual property, known as the PCT Payor. However the regulations also state that these two methods "do not exclude other possible applications of this method,"[35] as long as they are consistent with investor model principles.

Identifying alternatives available to the PCT Payee is an application of the Comparable Uncontrolled Transaction (CUT) methodology. According to Femia and Kirmil (2005) "Under the CUT approach, the present value of the PCT Payment is determined on the basis of the present value of the income the PCT Payee would receive under its best realistic alternative to a CSA, such as developing and exploiting the cost shared intangibles itself" (p. 460). In other words, the organization contributing intellectual property to the CSA should calculate the present value of income assuming it exploited the intangible asset itself, without a CSA. It should compare this figure to the present value of income, assuming it enters into a CSA. The buy-in payment (PCT) should equalize the present value of income between alternatives.

For example, suppose a MNE invests in a new technology. In one scenario the domestic parent funds the investment itself and is the sole intellectual property owner. It could exploit the technology abroad by licensing the technology to overseas subsidiaries. The present value of this investment is $100M. As an alternative, it could form a CSA with an overseas subsidiary. In this option, the domestic parent owns the US market, the subsidiary owns all other markets, and the intellectual property is owned jointly. If the present value of income in the US market is $60M, then it should receive $40M from the overseas subsidiary, either as a lump-sum payment or through royalties. In the IRS view, a rational investor would demand the same profit, discounted to present value, with or without the CSA.

[34] Prop. Regs. §1.482-7(g)(4)(ii)
[35] Ibid

Table III: Assumes US Parent receives royalty payment	Option 1: Exploit WW through licensing (no CSA)	Option 2: CSA—value of US market	Option 2: CSA—value of international markets (excludes US)
Present Value of Total Profits	$100M	$60M	
Sales			$100M
Royalty Rate			40%
(Payment) Receipt		$40M	($40M)
Present Value of Total Profits	$100M	$100M	

The US parent effectively earns the same profit despite significantly reducing its investment, through sharing development costs. If it funds the investment itself, it bears the entire risk of failure. If it joins a CSA, the other participants share the risk. Their reward is the discount rate.

As mentioned, the Income Method also permits a MNE to analyze realistic alternatives available to the organization not contributing pre-existing intellectual property to the CSA. This is the PCT Payor. According to the proposed regulations: "Under this application, the present value of the anticipated PCT Payments is equal to the present value, as of the date of the PCT, of the PCT Payor's anticipated profit from developing and exploiting cost shared intangibles."[36] This limits the Payor's return to the discount rate. As the regulations state, "This PCT Payment ensures that PCT Payors who do not furnish any external contributions to a PCT receive an appropriate ex ante risk adjusted return on their investment in the CSA." [37] An appropriate return is the discount rate. Any superior returns earned in the CSA belong to the participant making external contributions to the agreement.

In the following example, a pharmaceutical company is developing a new vaccine. In Year 1, the US parent (USP) and a wholly-owned foreign subsidiary, FS, structure a CSA to complete development of the vaccine. USP contributes a partially-developed vaccine and an experienced R&D team to the CSA, which are external contributions to the CSA. FS makes no such

[36] Prop. Regs. §1.482-7(g)(4)(iv)(A)
[37] Ibid

contributions to the CSA. The total cost of completing the vaccine is estimated to be $100 million, in year one dollars. USP and FS each have total projected sales of $100 million, in year one dollars. Accordingly, the two organizations share development costs equally.

FS profits from sales made in territories allocated to it. Its territorial operating profits are projected to be $80 million, generated by $100 million in sales minus $20 million in expenses. Its share of development costs ($50M) reduces total profits to $30 million. To compensate USP, FS needs to pay $30 million to USP. This could be a lump sum payment, or a royalty based on sales or profits. These payments reduce FS's income to the risk-adjusted discount rate, which the IRS believes is the appropriate return, as FS contributed no pre-existing intellectual property to the CSA.

Table IV	US Parent (USP)	Foreign Subsidiary
Estimated Territorial Operating Profits	Unlimited	$80M
Development Costs	$50M	$50M
Profit Net of Development Costs	--	$30M
Payment Received (Paid)	$30M	($30M)

Viewed from this perspective, the risk-reward opportunities for a potential CSA investor do not look attractive. If the CSA is not successful, it may lose its entire $50M investment. If it succeeds, the return is limited to the discount rate. The investment risk is high, but the potential reward is limited.

As the selected discount rate determines the maximum return, this figure is critically important. The regulations give taxpayers latitude selecting a discount rate, and recognize it should be risk-adjusted. The IRS states "the discount rate employed should be that which most appropriately reflects, as of the date of the PCT, the risks of development and exploitation of the intangibles anticipated to result from the CSA."[38] The regulations say the Weighted Average Cost of Capital

[38] Preamble to Proposed Regulations, 70 Fed. Reg. 51115, page 38 (8/29/05)

(WACC) for a publicly traded firm with a comparable risk profile could serve as the discount rate. The regulations also state a company's internal hurdle rate for investments bearing comparable risk could be an appropriate discount rate. Given the figure's importance, and the discretion permitted in the regulations, this figure is likely to be controversial.

Acquisition Price Method

A merger triggers the Acquisition Price method. As part of the integration process, the acquired firm revalues its assets after the acquisition. The difference between the acquisition price and the value of the firm's individual assets is unassigned, and according to the proposed regulations, this is the intellectual property value. If the acquired firm joins the CSA, this unassigned value is that firm's external contribution to the CSA. The firm must contribute substantially all of the acquired company's intellectual property to use this method.

To determine the intellectual property value, the firm must first calculate an "adjusted acquisition price." The regulations state this is "the acquisition price of the target increased by the value of the target's liabilities on the date of the acquisition, other than liabilities not assumed in the case of an asset purchase, and decreased by the value of the target's tangible property on that date and by the value on that date of any other resources and capabilities not covered by a PCT or group of PCTs."[39] Once the adjusted acquisition price is determined, the buy-in can be determined.

For example, suppose a US parent corporation, known as USP, structures a Cost Sharing Agreement with an overseas subsidiary, FS, to produce Product Y. Based upon Reasonably Anticipated Benefits, the two organizations share costs 50/50. In the year following the CSA's inception, USP buys Company X for $100 million. Company X's resources consist of its workforce, patents and technology intangibles, and tangible property. USP and Company X filed a consolidated tax return, so they are treated as one taxpayer, and the resources of Company X are treated as external contributions to the CSA. Company X contributes workforce, patents and technology intangibles to the CSA. It has $20M in land and $10M in liabilities not contributed

[39] Prop. Regs. §1.482-7(g)(5)(iii)

to the CSA. Under the Acquisition Price method, the intellectual property value is $90 million (the $100 million Acquisition Price, plus the $10M in liabilities, and less $20 million in net assets not contributed to the CSA). As FS bears 50% of CSA costs, it should make a $45M payment to USP, to compensate USP for Company X's external contributions.

Table V	US Parent (USP)	Company X	Foreign Subsidiary (FS)
Cost Sharing %	50%		50%
X's Acquisition Price	$100M		
Net Value of Property not contributed to the CSA		$10M ($20M in assets less $10M in liabilities not contributed to CSA)	
Value of Intangible Property contributed to CSA		$90M	
Buy-in Received (Paid)	$45M		($45M) 50% of $90M

Despite the proposed regulations, taxpayers may not agree the unassigned value equals the intellectual property value. There may be other contributions, unrelated to intellectual property. Perhaps the acquired firm has intangible assets unrelated to the CSA. Of course the taxpayer has the option of identifying and valuing all intangible assets, which should theoretically resolve the issue. But in the absence of comparable assets, it can be difficult to value them. However, as previously mentioned, as this method is triggered by a merger, it may not be used frequently.

Market Capitalization Method

The Market Capitalization Method is very similar to the Acquisition Price Method. However the firm's intellectual property value is determined by the market value of the business. As a result, this method can only be used when one of the participants is publicly traded. Taxpayers use this method when they contribute substantially all the firm's intellectual property to the CSA, consistent with the Acquisition Price Method. Similarly, it is expected this method will be used infrequently. There is nothing in the regulations that states the Market Capitalization Method must be used if a firm is public, so either the Acquisition Price Method or the Market

Capitalization Method could be used. But a privately held firm could not use the Market Capitalization; it would have to use the Acquisition Price Method.

The regulations propose taxpayers use an average market capitalization, rather than the market value on the date of the PCT. "The average market capitalization is the average of the daily market capitalizations of the PCT Payee over a period of time beginning 60 days before the date of the PCT and ending on the date of the PCT," according to the regulations. [40] The apparent purpose is to create a more stable buy-in value, which minimizes the chance that unusual stock market movement on the day of the PCT materially influences the valuation. This stability may support the IRS's legal position, should taxpayers challenge it.

Taxpayers must adjust this figure by the value of assets and liabilities not contributed to the CSA. According to the proposed regulations, "The adjusted average market capitalization is the average market capitalization of the PCT Payee increased by the value of the PCT Payee's liabilities on the date of the PCT and decreased by the value on such date of the PCT Payee's tangible property and any other resources and capabilities of the PCT Payee not covered by a PCT or group of PCTs."[41]

The arm's length charge for the external contributions is apportioned with Reasonably Anticipated Benefits. The proposed regulations state: "Under the market capitalization method, the arm's length charge for a PCT or group of PCTs covering resources and capabilities of the PCT Payee is equal to the adjusted average market capitalization, as divided among the controlled participants according to their respective RAB shares."[42]

[40] Prop. Regs. §1.482-7(g)(6)(iii)
[41] Prop. Regs. §1.482-7(g)(6)(iv)
[42] Prop. Regs. §1.482-7(g)(6)(ii)

As an example, suppose USP is a publicly traded US firm, with no overseas subsidiaries. It later creates a wholly-owned foreign subsidiary, FS. USP and FS will create a new generation of software products, based on intellectual property owned and developed by USP. USP contributes the intellectual property to the CSA. FS contributes no intellectual property to the CSA. Based on Reasonably Anticipated Benefits, USP will fund 80% of the CSA, and FS will fund 20%.

The average market capitalization for USP is $205 million, prior to the CSA's formation. USP will not contribute $10 million in liabilities and $15 million in land to the CSA. Using the Market Capitalization Method, the intellectual property contribution is $200 million ($205 million market capitalization, plus $10 million liabilities not contributed, less $15 million in land not contributed to the CSA). Therefore, FS owes a $40 million to USP.

Table VI	US Parent (USP)	Foreign Subsidiary (FS)
Cost Sharing %	80%	20%
Market Capitalization	$205M	
Net Value of Tangible Property not part of CSA	$5M ($15M land less $10M liabilities)	
Intangible Property Value	$200M	
Buy-in Received (Payment)	$40M	($40M)
Net CSA cost	$160M	$40M

Similar to the prior method, it is expected taxpayers will use this method infrequently. It should be used when a publicly owned firm forms a CSA with a foreign subsidiary. In addition, according to Femia and Kirmil, "The use of the market capitalization method ordinarily is limited to cases where substantially all of a PCT Payee's nonroutine contributions are covered by a PCT" (p. 460).

Residual Profit Split Method

The proposed regulations substantially modify the Residual Profit Split Method (RPSM). It is limited to situations in which more than one CSA participant makes significant external contributions to intellectual property development.[43] Analysts expect this method will be used more frequently than the Acquisition Price Method or the Market Capitalization Method. Femia and Kirmil (2005) say the RPSM first allocates to each participant "an amount of income to provide them with a market return for their routine external contributions" (p. 461). According to the regulations, "Routine contributions include contributions of tangible property, services and intangibles that are generally owned or provided by uncontrolled taxpayers in similar circumstances."[44] Routine contribution returns should be comparable to profits earned by businesses providing these services, and taxpayers are expected to perform a functional analysis upon these costs to determine an appropriate return. Routine contributions do not include the costs developing the intellectual property included in the CSA.

Taxpayers then allocate a portion of the profit or loss according to each participant's cost contribution share. [45] In other words, each taxpayer recoups its cost contribution to the CSA, which are the costs spent developing the intellectual property. The participants earn the discount rate upon these contributions, as the cost contributions are discounted to present value. It seems logical to assume the returns earned for developing the intellectual property would be higher than for performing routine contributions.

In the third and final step, residual profit is allocated to CSA participants based on the value of their nonroutine external contributions. "The relative value of nonroutine contributions of each controlled participant may be measured by external market benchmarks that reflect the fair market value of such nonroutine contributions,"[46] according to the proposed regulations. Of course market measures for nonroutine external contributions may not be readily available,

[43] Prop. Regs. §1.482-7(g)(7)(i)
[44] Prop. Regs. §1.482-7(g)(7)(iii)(B)
[45] Prop. Regs. §1.482-7(g)(7)(iii)(C)(2)
[46] Prop. Regs. §1.482-7(g)(7)(iii)(C)(3)

which is one of primary reasons the proposed regulations are needed. Therefore the proposed regulations provide a second method to allocate residual profit. "Alternatively, the relative value of nonroutine contributions may be estimated by the capitalized cost of developing the nonroutine contributions and updates," adjusted to present value.[47]

In the following example, suppose USP and its wholly-owned subsidiary, FS, separately develop new communications products. They form a Cost Sharing Agreement to combine these technologies. Prior to formation of the CSA, each has individually developed intellectual property which is essential to their combined product. Thus both make external contributions to the CSA. Prior to formation of the CSA, USP spent $3 million developing its technology, and FS spent $5 million doing the same. USP will exploit these technologies in the United States, and FS will exploit the technologies in the rest of the world. Based on demand forecasts, USP expects 40% of Reasonably Anticipated Benefits, and FS anticipates 60%.

CSA development costs will be $10M, in discounted dollars. Based on Reasonably Anticipated Benefits, USP will fund 40% of the costs, and FS will fund 60%. USP and FS expect to earn a total of $21 million worldwide from sales of the products, excluding the $10 million in cost contributions.

USP and FS each incur distribution expenses in their respective markets. These are routine contributions. Based on external market measures, they should earn $1 million on these contributions. According to the proposed regulations, "Market returns for the routine contributions should be determined by reference to the returns achieved by uncontrolled taxpayers engaged in similar activities…"[48] USP's expected routine return is $.4M, and FS's routine return is $.6M. After subtracting the routine return, $20 million remains unallocated. This completes the first step.

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[47] Ibid

[48] Prop. Regs. §1.482-7(g)(7)(iii)(B)

In the second step, the CSA participants recover their cost contributions. According to the proposed regulations, the "percentage allocable to the cost contribution share in this case is equal to each participant's share of total anticipated IDCs divided by the difference between its total anticipated operating profits in its territory and the total anticipated routine return in its territory."[49] This is very a convoluted way of saying each recovers its cost contribution. USP is entitled to recoup its $4M cost contribution, and FS recovers its $6M cost contribution. Kochman (2005) said, "This step would be equivalent to the cost contribution adjustment under the income method, and provides the participants a financing return for their investment in developing intangibles" (p. 9).

In the final step, CSA participants allocate residual profit according to the value of their nonroutine, or external contributions. If the external values are not determinable, they may use intangible development costs to allocate remaining profit. USP spent $3 million and FS spent $5 million, so USP is entitled to 37.5%, and FS 62.5%. Thus USP earns $3.75 million of the residual profit, and FS earns $6.25 million.

The Residual Profit Split Method is summarized below:

Table VII	USP	FS	Total	Step
Total Earnings	--	--	$21.0 million	
Return on routine contributions	$.4 million	$6.million	$1.0 million	One
Residual after step one	--	--	$20.0 million	
Cost Contributions	$4.0 million	$6.0 million	$10.0 million	Two
Residual after step two	--	--	$10.0 million	
External contributions	$3.0 million	$5.0 million	$8.0 million	
Allocation %	37.5%	62.5%		
Profit Allocation	$3.75 million	$6.25 million	$10.0 million	Three
Total Earnings Allocation	$8.15 million	$12.85 million	$21.0 million	Sum of steps one, two and three
Total Profit	$4.15 million	$6.85 million	$11 million	Total earnings less costs incurred

[49] Prop. Regs. §1.482-7(g)(7)(vii)

Note the Residual Profit Split Method allocates future profits. It does not determine CSA buy-ins. This is because both parties make external contributions to the CSA. If a third party participates in the CSA, and it made no external contributions to the agreement, it would receive no residual profit in the final step.

To summarize, taxpayers should used the Residual Profit Split Method when two or more organizations make nonroutine external contribution to a CSA. A market rate of return should be earned on routine contributions to the CSA. Each participant is entitled to recover its cost contribution. Taxpayers allocate the remaining profit based on either the value of intellectual property contributed, which may be difficult to measure, or the costs incurred to develop those external contributions.

Comparable Uncontrolled Transaction Method

The Comparable Uncontrolled Transaction method is retained in the proposed regulations. Taxpayers should evaluate a PCT (buy-in) "by reference to the amount charged in a comparable uncontrolled transaction."[50] Once that figure is determined it "must then be multiplied by each PCT Payor's respective RAB (Reasonably Anticipated Benefits) share in order to determine the arm's length PCT Payment due from each PCT Payor."[51] However, once again it is not expected this approach will be used frequently, as the IRS believes there are few, if any, business relationships comparable to a CSA.

Unspecified Methods

Consistent with current law, the IRS regulations permit taxpayers to adopt unspecified methods. However any unspecified method must be consistent with the investor model, and derive values based upon realistic alternatives available to the taxpayer.

[50] Prop. Regs. §1.482-7(g)(3)
[51] Ibid

The proposed regulations state: "Consistent with the specified methods, an unspecified method should take into account the general principle that uncontrolled taxpayers evaluate the terms of a transaction by considering the realistic alternatives to that transaction, and only enter into a particular transaction if none of the alternatives is preferable to it. Therefore, in establishing whether a PCT (buy-in) achieved an arm's length result, an unspecified method should provide information on the prices or profits that the controlled participant could have realized by choosing a realistic alternative to the CSA." [52]

Practical Issues with the Proposed Regulations

Industry and professional tax organizations are very critical of the proposed regulations. There are many practical problems with the regulations, such as difficulties complying with, interpreting, and administering them. There are also conceptual problems with the regulations, such as whether they are consistent with the arm's-length transfer pricing standard, and whether they truly reflect the approach an investor would take when valuing intellectual property. Practical issues will be discussed first and conceptual issues next.

Determining the appropriate discount rate may not be easy. Discounting future returns by a risk-adjusted rate is sound. In financial theory each investment should have its own discount rate, reflecting that project's risk. The regulations support this approach. Since this figure determines where profits are earned, it is extremely important to many parties. But determining the risk of a project, and the appropriate risk-adjusted discount rate, is inherently speculative. The proposed regulations permit taxpayer discretion, and this latitude will lead to disputes with the IRS. The Tax Executives Institute (TEI) says, "Instead, a discount rate that takes into account the unique risks and rewards of a CSA must be developed – a highly subjective exercise likely to increase controversy between the taxpayer and the IRS" (2005, p. 631). In the absence of clearer guidance from the IRS, taxpayers and the IRS will dispute this figure. For example, the regulations state an experienced work force an external contribution to a CSA. Valuing an experienced workforce is not a straightforward task.

[52] Prop. Regs. §1.482-7(g)(8)

The regulations presume businesses have the ability to forecast future results accurately, and thus organize operations to achieve tax-advantaged results. But long-range forecasts are often unreliable. Some businesses do not require detailed financial plans more than a year in advance, because they consider such forecasts undependable. This is particularly true in the technology and pharmaceutical industries. Highly competitive industries, facing rapidly changing technologies, find it difficult to forecast financial results accurately years in advance. The court noted in the Xilinx v. Commissioner how difficult it is for taxpayers to predict the future, commenting that taxpayers "are merely required to be compliant, not prescient." [53] The IRS proposed regulations may not reflect the difficulties companies face forecasting future results.

Furthermore, technology development is inherently speculative. According to TEI (2005) "It is difficult to identify in advance those technologies that may turn out to be critical or the platform for future development. Uncertainty is inherent in the nature of R&D, and crucial developments can sometimes only be identified with the benefit of hindsight. Many extremely valuable products (such as penicillin) were the result of serendipity, having been discovered by scientists driving toward different objectives" (p. 635). Some technology breakthroughs might be considered very promising, but it may be very difficult to predict the benefits. For example, many firms are making investments in nanotechnology and stem cell research, but it is impossible to predict the commercial results of such investments. At a CSA's inception, participants may honestly attempt to comply with the regulations. But technology breakthroughs often lead to products never contemplated when a project began. If the investment is extremely successful, a buy-in may appear undervalued in retrospect. If the buy-in is over-valued, however, the taxpayer cannot revalue it. The regulations give no indication the IRS should do so. Taxpayers complain the proposed regulations reflect a "heads I win, tails you lose" perspective at the IRS.

Related to this, Kirschenbaum and Rahim (2005) believe the IRS's proposal that it should have the sole power to make cost sharing adjustments is inconsistent with current transfer pricing law.

[53] Xilinx Inc. v. Commissioner (125 T.C. No. 4) 8/30/05

They write that an existing regulation "clearly grants taxpayers the discretion to adjust their financial statement results in a timely filed return if necessary to achieve an arm's length outcome."   They add "The proposed regulations' ill-conceived attempt to tip the commensurate-with-income scales should be reversed, and if it is not removed from the final regulations, the authors fully expect it to be unceremoniously rejected by a reviewing court." (p. 436). In other words, they believe the proposed regulations are inconsistent with legal precedent and IRS code, which are higher tax authorities than regulations. They believe courts will invalidate at least that section in the proposed regulations.

The proposed regulations also appear confusing to many tax experts, a group that regularly interprets ambiguous and complicated tax law. According to TEI (2005), "It is unclear, however, how the specified valuation methods interact with the investor model and the realistically available alternative principle. Equally unclear is whether the investor method and the realistically available alternative standards are one and the same, and, even if they are not, why both are necessary" (p. 632).   TEI makes a valid point. At some points the regulations emphasize that returns should be based upon realistic alternatives available to the taxpayer. But then they suggest a firm's WACC, or the WACC of a similar firm in a similar industry should be used to determine a CSA participant's return. Should the taxpayer assume these terms are equivalent? If a business believes its business possibilities offer returns exceed their WACC, which figure should they use?

Finally, critics believe the additional reporting requirements, complexity of the regulations, and the likely IRS disputes will increase the taxpayer's administrative burden. As Kochman (2005) wrote: "in trying to guard against bargain transfers of existing intangibles, the proposal would place huge upfront burdens on participants in CSAs and, at least in the eyes of many practitioners, would unduly limit the potential upside from entering into a CSA" (p. 684).

Conceptual Issues with the Proposed Regulations

In addition to the practical issues with the regulations, they may not emulate the way investors value intellectual property investments. One obvious issue is the regulations require taxpayers to discount future profits, not future cash flow. For many years financial theory has argued investors should discount future cash flow to value investments, not future profits. Thus the regulations recommend an approach that fundamentally varies from the widely accepted financial methodology. In many ways it is understandable that the regulations require taxpayers to discount future profits. US corporate tax law has consistently taxed profits, not cash flow. Building tax laws around Discounted Cash Flow (DCF) would be a major departure from most other tax laws and many legal precedents, so this would be a momentous change. Nonetheless, it must be noted that modern financial theory almost universally recommends investors use DCF analysis to value investments, and the proposed regulations take a fundamentally different approach.

Dau (2006) questions whether taxes should be based upon realistic alternatives available to the taxpayer. He writes, “This is a dangerous and unwarranted departure from the well-established rule that federal income taxation must be based on what taxpayer has actually done, not what it might have done” (p. 70). Dau’s point is valid. At several points the proposed regulations state CSA participant returns must be based upon realistic alternatives available to the taxpayer. Moving from taxing actual results to hypothetical alternatives is a huge conceptual leap, and does not appear to be based upon existing tax laws. If returns are to be determined by hypothetical alternatives, will the IRS begin to audit and evaluate the realistic alternatives available to a taxpayer?

In addition, a number of the IRS’s assumptions may not be correct. As explained previously, the IRS argues CSAs are unique business arrangements, unlike any “superficially similar” business agreements. In its view, investor model regulations are necessary because it is not possible to find similar business structures. The regulations begin with the assumption CSAs are unique, as participants share intellectual property development costs, but separately exploit the results. In the absence of comparable business arrangements, finding useful transfer prices is not possible.

However the IRS's premise is not accurate. There are a number of business agreements similar to CSAs. Dau (2006) noted that GM, DaimlerChrysler, and BMW recently partnered to develop a hybrid engine, which each company plans to use in its own autos. He wrote "In short, under this arrangement, the participants will have worldwide, nonexclusive rights to the separate exploitation of the co-developed technology, a type of arrangement consistent with the current cost sharing regulations but not permitted under the Proposed Regulations" (p. 69).

Similarly, in my business experience I have seen several agreements very similar to the ones Dau described. Hewlett-Packard (HP) and Intel each invested hundreds of millions to develop an integrated circuit, Itanium, which each corporation exploited separately. HP incorporated the integrated circuit in computer servers, while Intel sold the chip to HP competitors. HP and Intel developed the integrated circuit together, but profited from the products separately. On another occasion, HP and Oki Semiconductor built a printed circuit board factory in Puerto Rico. The two companies shared the costs of the factory. HP's objective was to use the facility to supply its internal needs for printed circuit boards in Puerto Rico, while Oki's goal was to sell its 50% share to external customers. HP planned to transfer the products internally at cost, while Oki's goal was to sell the products to external customers at market prices. HP and Oki shared costs equally, and planned to exploit the benefits separately.

Businesses also make other business agreements prohibited by the regulations. According to TEI (2005) "taxpayers frequently enter into third-party agreements that provide for nonexclusive, overlapping rights. For example, rights to exploit digital products may be licensed nonexclusively through multiple licenses that, in turn, distribute to overlapping territories, using various media for distribution" (p. 635). The proposed regulations prevent business arrangements that arm's-length investors employ. In general tax law allows businesses to organize activities in the most effective manner, and taxes the results. But in this case the proposed regulations dictate how businesses should organize their operations to achieve IRS objectives.

Likewise, the IRS says new regulations are necessary because taxpayers have superior information. Many question whether taxpayers truly have an information advantage. Taxpayers do know more about their business prospects than the IRS. But at the same time, the IRS has substantial information not available to taxpayers. For example, the IRS negotiates Advanced Pricing Agreements (APA) with many taxpayers. Taxpayers and the IRS agree upon company-specific transfer pricing policies in these agreements. The IRS has the advantage of negotiating APAs with many taxpayers, which it shares internally. However taxpayers cannot share their agreements. The IRS also has the ability to review tax returns for many organizations, and focus its legal resources on promising cases. Taxpayers do not have the ability to view other tax returns to assess their risk. One can argue who has superior information, but the IRS is not consistently at a disadvantage. However the IRS argues that its information is consistently inferior, and this is one of the key reasons it proposes the powers it needs to support the investor model.

One significant change in the proposed regulations affects the risk/reward incentives of related taxpayers. The proposed regulations shift the relationship between controlled taxpayers in ways uncontrolled parties would not accept. For example, suppose a US-headquartered business was contemplating a risky, $100M investment that showed great potential. Without a CSA it would bear the entire $100M risk, but would have the opportunity to exploit the product throughout the world through licensing. Alternatively, it could enter into a CSA with an overseas subsidiary. Based on Reasonably Anticipated Benefits, each organization would fund half the $100M investment. The US parent could cut its investment in half.

If the investment succeeds the overseas subsidiary could earn no more than the discount rate. It could lose its entire $50M investment if it failed. This is not an attractive risk/reward relationship. In contrast, the US parent would also risk $50M in the investment, but this is half the original investment, and its potential reward is unlimited. In addition, while a high discount rate could compensate the subsidiary for the risk borne, the IRS has the power to reduce this figure. With the benefit of hindsight, risky investments might appear to be sure bets, and the IRS may dispute high discount rates earned on successful investments.

Would an unrelated party make a risky investment with limited profit potential? This is unlikely. As Lemein, Lipeles and McDonald (2006) commented: “Thus, a party that makes a financial contribution to the CSA fully shares in the down side risk and only receives a small portion of the up side benefits of the developments that it helps to fund” (p. 10). The arrangement does not appear equitable, and seems inconsistent with the arm’s-length principle. If the regulations supported the arm’s-length standard, one would expect the IRS could provide examples of investors accepting similar terms. The IRS provides no evidence such agreements exist, as there may be none.

Others have criticized the profit limitations on organizations not contributing intellectual property to a CSA. Managers seek to add value to a company, and most do not support investments in projects not demonstrating the possibility of earning a positive NPV, or a high rate of return. As Lemein, Lipeles and McDonald (2006) stated, “At least with respect to risky venture, we understand that some taxpayers in practice require a return on investment that is higher than the WACC” (p. 4). TEI (2005) shared this concern, stating “A WACC for an entire company blends together all the projects a company may undertake. The cost of capital for any specific research effort, however, may be considerably higher than a WACC based on the activities of a diversified company as whole” (p. 4). Given the inherent difficulty predicting future returns, many taxpayers only consider investments with positive net present values and high potential rates of return. A potential investment that will earn, at best, zero net present value, does not sound attractive.

Related to this, in many cases the proposed regulations allocate too much value to external contributions. According to the proposed regulations the Income Method should be used if only one organization makes an external contribution to the CSA. That organization should earn all residual profit, after other participants earn the discount rate on the investment. Suppose two organizations form a CSA to develop a new product. Based upon Reasonably Anticipated Benefits, they share the $100M investment 50/50. Organization A makes an external contribution valued at $1K, and Organization B makes no external contribution. According to the regulations, it appears this $1K contribution entitles Organization A to earn all residual profits, and Organization B earns no more than the discount rate. The regulations do not stipulate the external contributions need to be significant or material. This makes no economic sense. Unrelated parties would not allocate all residual profits based upon a modest intellectual property contribution.

At the same time, the regulations do not value contributions made to the CSA after inception. In the above example, if Organization B contributed its most talented employees to the CSA, and they made many intellectual property contributions to the CSA, Organization B would earn no more than the discount rate. If it contributed its least talented employees, and they contributed little, it would still earn the discount rate. The regulations offer no incentives to add value. Unrelated parties would not agree to this. As explained earlier, the 1968 treasury regulations said CSAs should reflect: "an effort in good faith by the participating members to bear their respective shares of all costs and risks of development on an arms-length basis."[54] The proposed regulations do not achieve this objective.

This may point out a significant difference between how the IRS views a CSA, and how industry looks at the development of intellectual property. By emphasizing the value of external contributions, the IRS assigns enormous value to the work completed before the CSA began. In contrast, businesses are more focused upon the intellectual property that will be developed in the future. It matters little to a business what contributions were developed prior to the agreement;

[54] 1968 Regs. §1.482-2(d)(4)

the critical issue is what intellectual property will be developed in the future. In short, the IRS appears to be backward looking, while businesses are forward looking.

In the same way, the Residual Profit Split Method also makes little economic sense. When two or more organizations make external contributions to the CSA, they share profits based on the value of their external contributions. Suppose two organizations agree to make a $100M investment. Organization A makes a $90K external contribution, and Organization B makes a $10K contribution. Apparently Organization A should earn ninety percent of residual profits, and Organization B ten percent. Unlike the Income Method, the Residual Profit Split Method references “significant” external contributions, but that term is not defined. From a legal perspective, the firm has a defensible position if it allocates residual profits according to that 90/10 ratio; it is not clear how they should allocate profits if they select another method. The investor model places too much value upon pre-existing intellectual property, in ways that can lead to irrational residual profit allocations.

While it is clear the regulation’s intent is to increase US tax revenue, it is not certain this goal will be realized. Tax professionals will use the regulations to their advantage. Given that profit is allocated based on external contributions, tax attorneys and accountants will consider this when structuring CSAs. Before a CSA is completed, an organization in a low-tax jurisdiction could make a modest external contribution that would entitle it to earn all residual profit. By assigning excessive value to external contributions, the regulations provide ways to achieve tax-advantaged results.

The regulations prohibit declining royalty rates, and this also assigns excessive value to pre-existing intellectual property contributions, particularly since the regulations govern follow-up products. When one product leads to successors, the regulations apply. To take a well-known example, in the early 1980’s Microsoft released its DOS operating system. DOS led to many versions of Windows, which were significant product improvements. Soon Microsoft will release a new operating system, Vista, its latest version. Following the IRS logic, DOS led to all subsequent Microsoft operating systems, and all residual profits on Vista and successor products were driven by DOS. If other Microsoft entities contributed to successor operating systems they should earn a financing rate of return, funded by a discount rate that may be difficult to determine. But in reality, Microsoft's many enhancements and improvements upon DOS contributed to the operating system's success. Today's operating system bears little resemblance to DOS, a very crude, user-unfriendly product by today's standards. DOS would have died quickly without improvements. Economists can argue about how to apportion economic value between DOS and its many improvements, but to associate all residual value to DOS is unreasonable. Declining royalty rates make economic sense in certain circumstances. Declining royalty rates may reflect the reality that that few contributions create permanent value; competition never ceases and few technological advances, however important, yield superior rates of return in perpetuity.

Finally, TEI disagrees with the premise each CSA participant is, in effect, managing a portfolio of potential investments. While CSA participants are separate legal corporations, they do not manage their own investment portfolio. In most MNEs, a company's senior management makes major product, investment and technology decisions. Companies form subsidiaries to facilitate overseas sales. Senior management makes decisions concerning the location of overseas R&D teams, based on local talent and costs, among other factors. But in practice each overseas subsidiary lacks the authority to chart its own investment strategy. As the TEI writes, "In a CSA there is little, if any, opportunity for any party to manage risk through diversification or to divest itself of underperforming assets – characteristics of a true investment" (p. 631). In summary, the IRS investor model is inconsistent with the way MNEs operate in reality.

In summary, there are serious conceptual problems with the proposed regulations, and they may not reflect how investors would actually value intellectual property investments. They require taxpayers to discount future profits, while discounting cash flow is a superior approach. They are premised upon the assumption CSAs are unique legal agreements, and that the IRS suffers from an information asymmetry. However both of these assumptions are debatable. They distort the risk/reward relationships for related taxpayers in ways that are not reasonable or rational. The proposed regulations assign too much value to pre-existing intellectual property contributions, and too little to the ongoing contributions over the life of a product and its successors. While the IRS's intention is clearly to increase US tax revenue, the proposed regulations are so restrictive, they may encourage taxpayers to avoid them. Thus they may not achieve their objective.

A Further Complication: Xilinx v. Commissioner

In addition to these issues, a tax court ruling undermined the IRS's position just one week after the proposed regulations were released. In Xilinx v. Commissioner (125 T.C. No. 4) the court sided with a taxpayer that challenged an IRS position. This decision may support critics of the proposed regulations who contend they are inconsistent with other tax laws and the arm's length standard.

The IRS regulation position was challenged by the Silicon Valley integrated circuit company, Xilinx. The firm's US parent entered into a Cost Sharing Agreement (CSA) with an overseas subsidiary. The participants did not share stock-based compensation costs, such as stock options, in the agreement. The IRS argued this compensation should have been valued and shared in the CSA, which would have transferred a portion of those costs to overseas subsidiaries. The IRS initiated the case in 2002, before it released regulations specifically stating stock-based compensation must be included in Cost Sharing Agreements.

The Tax Court sided with Xilinx, and said these costs need not be included in the CSA. The case hinged upon interpretation of the arm's-length standard. The IRS presented many economic reasons why stock-based compensation should be included in the CSA, but provided no evidence that unrelated parties actually agreed to share such costs. Xilinx demonstrated that unrelated parties do not share these costs. Xilinx showed that commercial businesses engaged in similar agreements consistently excluded stock-based compensation. In it decision, the tax court quoted one of Xilinx's experts, who said: "In the real world, these measures (the spread and grant date value) are so speculative and controversial, and the link between them and the value of R&D functions performed by the ...holder is so tenuous, that unrelated parties in joint research agreements simply do not agree to pay any amount" (Krupsky, 2005, p. 647). The tax court determined the arm's length standard was the critical issue, and ruled in favor of Xilinx, since it demonstrated that these costs are not shared by unrelated parties in similar circumstances.

Similarly, the IRS proposed regulations are premised on the assumption arm's length transfer prices cannot be found, so they have developed an investor model that accurately reflects how investors would value hypothetical intellectual property investments. Some taxpayers might choose to challenge the IRS assumptions, citing the agreement car companies made to develop a hybrid engine, the HP/Intel agreement, or HP/Oki printed circuit board example, as evidence that firms do make agreements to exploit investments separately even when they share costs. Demonstrating that such agreements do exist undermines the IRS's entire rationale for the proposed cost sharing regulations. The Xilinx ruling could serve as a very useful precedent for this legal strategy. As mentioned, Kirschenbaum and Rahim (2005) argue the proposed regulations are inconsistent with other tax laws, and have also written the regulations "do not promote internally consistent treatment of transfers under the Internal Revenue Code" (p. 439). The Internal Revenue Code is the highest US authority for tax laws, and taxpayers may successfully argue the proposed regulations do not support the arm's length standard in the IRC.

Critics of the regulations believe the proposed regulations depart from the arm's-length standard. Citing 2003 regulations, Krupsky (2005) asked: "Can the new regulations make something which is not arm's length, arm's length, just by saying so?" (p. 647). This same question could be directed at these proposed regulations. Even if the proposed regulations are finalized, taxpayers may argue the regulations are inconsistent with IRC §482 and the Xilinx case may provide support for this position.

Taxpayer Alternatives

Reaction to the proposed regulations has been almost uniformly negative. After issuing the proposed regulations, the IRS invited comments from taxpayers, who responded critically. Most urged the IRS to make substantial modifications to the regulations, or suggested they be withdrawn. Given that the regulations are unpopular with US-based MNEs, how will these firms respond to the proposed regulations if they are enacted without substantial modification?

One option would be to ignore the proposed regulations altogether. Internal Revenue Code (IRC) is a higher tax authority source than are regulations, as the Congress specifically approves the IRC. Regulations are the IRS's interpretation of the IRC, and courts may overrule regulations inconsistent with the IRC. Taxpayers may argue the regulations contradict the arm's-length standard in IRC §482. Taxpayers can provide evidence that CSAs are not unique business arrangements, and that arm's-length valuation approaches exist. They can provide evidence that the proposed regulations are inconsistent with other regulations and the arm's-length standard. In particular, the proposal that only the IRS should have the empowered to make retroactive CSA changes appears inconsistent with other regulations. As the Tax Executives Institute (2005) writes, "TEI submits that this one-way street approach is inherently unfair, contrary to the statute, and inconsistent with the arm's-length standard. Section 482's mandate that the income with respect to a transfer or license of an intangible shall be 'commensurate with income' is neutral and unequivocal" (p. 635). And the taxpayer victory in Xilinx v. Commissioner demonstrates the taxpayers can defeat the IRS in court, particularly when the taxpayer provides evidence its transfer pricing policies are consistent with the arm's-length standard.

Taxpayers could also craft CSAs now, before the IRS enacts the proposed regulations. Taxpayers will find the current regulations less restrictive than the proposals, and may want to form CSAs before they take effect. The proposed regulations do provide transition rules, which encourage taxpayers currently in CSAs to migrate to the new regulations. But they do not require taxpayers to adopt the new rules. Conforming to current regulations would also add legal support to a taxpayer's position that it complies with the arm's-length principle, should the IRS later challenge its transfer pricing policies.

Transferring intellectual property overseas is another option. Punitive regulations are not in effect in other countries. Kochman (2005) writes "Some speculate that by increasing buy-ins and otherwise eliminating incentives for cost sharing, the regulations would discourage participation in CSAs, potentially causing companies to move their research and development activities offshore" (p. 2). This would require the sale of the intellectual property, but today many MNEs have substantial cash abroad, and may want to transfer cash to the US. Purchasing intellectual property may be one avenue to do this. Once firms transfer the intellectual property abroad, they would not be subject to the proposed regulations, and they could fund US R&D through cost-plus markups. Ironically, there is a large body of US tax law providing guidance on these transfer prices.

In addition, many US firms have already established substantial R&D operations abroad. They can document the external contributions of those organizations. If the proposed regulations are approved as written, taxpayers can structure CSAs with tax objectives in mind. Firms could allocate profits to organizations already located in tax havens. In other words, firms might accept the regulations and use them to achieve tax-advantaged results.

Each of the above alternatives demonstrates that intellectual property is highly portable, and US based MNEs have many options to respond. It is doubtful whether restrictive regulations can achieve their intent. Many MNEs dislike the proposed regulations and the associated tax increase. They are likely to seek alternatives, and in a globalized world in which nations compete to attract profitable enterprises, they may find them. The IRS may not have the ability to implement restrictive regulations on global businesses.

Is there anything businesses might find attractive in the proposed regulations? While the IRS aimed the regulations at US headquartered firms, US subsidiaries of overseas parents might adopt them, as well. These firms could apply these regulations on their US operations. As Tobin (2005) wrote: "the proposed regulations could create an enhanced avenue by which foreign MNCs (multi-national corporations) could generate deductions that would effectively strip earnings from the United States though the CSA by way of cost-sharing payments, as well as royalties or other consideration for foreign-contributed intangibles" (p. 34). In short, it is quite possible the proposed regulations will achieve the opposite of their intent.

Conclusion

The IRS does have a legitimate concern when it questions the sums paid for intellectual property transfers. However its investor model does not achieve its goal of modeling how unrelated parties would enter into similar business transactions. They are premised on the flawed assumption that CSAs are unique business arrangements. The regulations allocate profit primarily according to the value of work performed before the Cost Sharing Agreement was completed. In contrast, businesses are less concerned with the past, and more concerned with structuring agreements that motivate both parties to create valuable intellectual property in the future. By capping the rewards upon organizations that do not contribute pre-existing intellectual property, they do not motivate those parties in the same way third-party business agreements would. Similarly, they distort risk and reward incentives in ways few third parties would conclude is fair and reasonable. They prohibit related taxpayers from creating agreements that permit non-exclusive, overlapping rights, when in practice some businesses do make such agreements. In short, the proposed regulations are not consistent with the arm's-length standard in a number of important ways. They appear crafted to raise US tax revenue and to simplify IRS enforcement, but the term "investor model" may not be warranted, as they do not reflect they way in which unrelated parties would structure similar agreements.

Glossary

The proposed regulations include many new terms. In several cases, they introduce new tax concepts. Following are key terms used in the proposed regulations:

CSA (CSA): This is the legal agreement taxpayers make to share intellectual property development costs.[55] The current regulations label them Qualified Cost Sharing Agreements (QCSAs). The terminology change distinguishes current from proposed regulations.

Intangible Development Costs (IDCs): IDCs are costs incurred to develop intangible assets. They are "all costs, in cash of in kind (including stock-based compensation…) but excluding costs for land or depreciable property"[56] contributing to intellectual property development. CSAs compensate for use of these assets through an arm-length rental charge. IDCs do not include external contributions to the CSA.

Cost Sharing Transaction (CST): A CST is a "controlled transaction between or among controlled participants in which such participants share the IDCs of one or more cost shared intangibles in proportion to their RAB shares from their individual exploitation of their interests in the cost shared intangibles that they obtain under the CSA."[57] Taxpayers make CST payments to share costs proportionately with their RAB share.

Reference Transaction (RT): A Reference Transaction provides all the rights, exclusively and perpetually, to a resource or capability made available to a CSA. [58] For example, suppose two controlled taxpayers, P and S, form a CSA to develop future versions of certain software. If P

[55] Preamble to Proposed Regulations, 70 Fed. Reg. 51115, page 15 (8/29/05)
[56] Prop. Regs. §1.482(7)(d)(1)
[57] Prop. Regs. §1.482-7(b)(2)
[58] Preamble to Proposed Regulations, 70 Fed. Reg. 51115, page 17 (8/29/05)

contributes a prior version of that software to the CSA, and its source code serves as the platform for future versions of the product, that contribution is a Reference Transaction. Current regulations do not require perpetual and exclusive intellectual property contributions.

External contributions: External contributions are “any resources or capabilities which one or more controlled participants brings to a CSA that were developed, maintained, or acquired externally to the CSA (whether prior to or during the course of the CSA), and that are reasonably anticipated to contribute to developing cost shared intangibles.”[59] The source code cited in the prior example is an external contribution. An experienced research and development team is also an external contribution. [60]

Preliminary or Contemporaneous Transaction (PCT): A PCT is a “controlled transaction in which each other controlled participant (PCT Payor) is obligated to compensate a controlled participant (PCT Payee) for an external contribution of the PCT Payee.” [61] When an external contribution is made to a CSA in a Reference Transaction, the donor is due compensation from other CSA participants. PCT replaces the term “buy-in” used in current regulations.

Reasonably Anticipated Benefit (RAB): Reasonably Anticipated Benefits are the projected future financial benefits from exploiting cost shared intangibles. The RAB share equals each participant’s RAB, divided by the sum of all participant RABs. Both proposed and current regulations use this term.

Present Value of Total Profits (PVTP): PVTP is the sum of profits earned from the start of the CSA, throughout its entire life, discounted to present value. The proposed regulations discount

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[59] Preamble to Proposed Regulations, 70 Fed. Reg. 51115, pages 16-17 (8/29/05)
[60] Preamble to Proposed Regulations, 70 Fed. Reg. 51115, pages 27-28 (8/29/05)
[61] Prop. Regs. §1.482-7(b)(3)(i)

future profits, not cash flow. While finance texts recommend discounting cash flow, U.S. law taxes profits, not cash flow.

Present Value of Investment (PVI): This is the total investment in the CSA, discounted to present value.

Applicable Discount Rate (ADR): The ADR discounts total profits and investments to present value.

Actually Experienced Return Ratio (AERR): The AERR is a PCT Payors actual Present Value of Total Profits (PVTP) divided by the actual Present Value of Investment (PVI). The AERR is calculated from the start of the CSA throughout its life. If the AERR is outside the PRRR, described below, the IRS may adjust CSAs.

Periodic Return Ratio Range (PRRR): These are a range of returns immune from IRS transfer pricing adjustments. The PRRR is .5 to 2.0 when taxpayers meet documentation requirements. When documentation requirements are not met, the regulations narrow the PRRR to .67 to 1.5. The documentation requirements simplify the IRS audit process.

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