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Financial Assumptions Regarding the Sensitivity of IRS Cost-Sharing Regulations

by Stuart Webber

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key objective of the Treasury Department's temporary cost-sharing regulations is to determine more accurate buy-ins to cost-sharing agreements (CSAs). To calculate these figures firms need to project financial results many years into the future. When the IRS first announced its investor model in 2005, a number of critics argued that it placed an unrealistic burden on taxpayers to forecast future financial results accurately. For example, the Tax Executives Institute (2005) wrote:

reliable long-term projections required by the investor model may be impossible to produce. Generally, the most reliable projections are those used for non-tax purposes. Projections beyond three-to-five years, however, are rarely used in business, precisely because of their inherent unreliability. [P. 632.]

While the 2009 temporary cost-sharing regulations have modified the investor model in some respects, they still depend on a firm's ability to predict future results with precision. Keates, Muyelle, and Wright (2009) write:

This requirement means that all multinationals must forecast, accurately, as far as 15 to 20 years in the future. The authors' experience is that most companies find it difficult to produce accurate forecasts three to six months into the future, much less 15 to 20 years for technology (and products) that do not exist when the forecasts must be created. Thus business reality, combined with punitive nature of the penalties for failure to

accurately forecast, make this aspect of the 2008 Regulations wholly unrealistic. [P. 169.]¹

It may be difficult for any firm to forecast results accurately a decade or more into the future, but it may be particularly challenging for high-technology and pharmaceutical firms. First, it may be impossible to know whether research and development activities will yield successful products. Second, even if the products are developed successfully, it may be very difficult to estimate the financial returns for unproven products and services. Bhasin (2009) wrote:

There are situations where the future is truly unknown, and probabilities are assigned to possible outcomes based on information available at the time of the transaction. For example, in the pharmaceutical industry, it is very difficult to predict the probability of success given the hurdles at various stages of product development, approval by the Food and Drug Administration and, once the drug is approved, from the competitors and the marketing of the product. [P. 2.]

While computer and electronics firms do not have to seek approval of the FDA to release products, they still confront the R&D, manufacturing, marketing, and competitive issues facing the pharmaceutical industry.

¹The temporary cost-sharing regulations were released in December 2008 and were effective as of January 5, 2009. Thus, several analysts refer to them as the 2008 regulations and others as the 2009 regulations. I will refer to them as the 2009 regulations, but Keates, Muyelle, and Wright cite the earlier date. They are, in any case, the same temporary regulations.

In short, it may be difficult for any firm to forecast financial results accurately years into the future, and it may be particularly challenging in high-technology and pharmaceutical industries. The Tax Executives Institute (2005) described this problem well when it wrote:

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.]

Valuing a CSA Buy-In

To determine more accurate CSA buy-ins, or what the temporary cost-sharing regulations call platform contribution transaction (PCT) payments,2 the investor model purports to simulate an investor's approach to investment decisions. Thus the regulations employ time value of money principles to discount future financial returns. The temporary cost-sharing regulations describe six different methods that can be used to apply investor model principles. These methods include the income method, the residual profit-split method (RPSM), the market capitalization method, the acquisition price method, the comparable uncontrolled transactions method, and it permits unspecified methods as long as they are consistent with investor model principles.³ The best method rule directs firms to use the method that best reflects the facts and circumstances of the CSA.4

To analyze the sensitivity of the temporary costsharing regulations to financial assumptions, it is worthwhile to begin with an example from those regulations. While any of the examples would demonstrate their sensitivity to financial assumptions, I have used the example the Treasury regulations use to explain how the RPSM should be applied.

The RPSM should be used when two or more organizations each contribute valuable intangible assets to a CSA.⁵ The temporary regulations call these contributions PCTs.⁶ When two or more related entities contribute intangible assets in a CSA, they need to determine if one organization should compensate another participant for the value of intangible assets the latter organization contributed. This aligns financial rewards with contributions to the CSA. In a CSA, each organization profits separately from the products or services

To do this, a multinational entity (MNE) needs to project financial results, and calculate what the Treasury regulations call reasonably anticipated benefits. These financial forecasts can then be used to determine if one entity within the MNE should make payments to another related entity for the value of its contributions to the CSA. The authors I quoted at the beginning of this article questioned how reliable those financial forecasts could be due to the inherent difficulties of making accurate, long-term financial forecasts.

As mentioned, the RPSM approach should be used when at least two organizations have made substantial contributions to the CSA. The temporary regulations call these "nonroutine contributions." Kochman (2009) says: "The present value of the nonroutine residual profit or loss in each participant's division is allocated among the participants in relation to their nonroutine contributions" (p. 562). In other words, if a CSA generates products with unusually high profit margins, these profits should be shared between CSA participants based on the value of what each organization contributed to the CSA.

The 2009 temporary regulations provide an example in which two CSA participants each make nonroutine contributions to a CSA. The two firms are the U.S. Parent (USP) and its Foreign Subsidiary (FS). USP develops the firm's technology and markets its products in the United States, while FS markets products internationally. In this example, USP has partially completed development of extremely compact storage discs, called nanodisks. Also, FS:

has developed significant marketing intangibles outside the United States in the form of customer lists, ongoing relations with various OEMs, and trademarks that are well recognized by customers due to a long history of market successful data storage devices and other hardware used in various types of consumer electronics.⁹

They form the CSA to market the product internationally. FS's marketing intangibles contribute to the nonroutine profits earned only in its territory; they do not contribute to nonroutine profits earned in the United States.

The key financial assumptions in this example are:10

• The firm will make no sales during the first year of the CSA. Sales rise to \$200 million in year 2, and grow at 50 percent per year through year 5.

created in the agreement. If one organization is expected to earn, for example, 70 percent of the benefits from a CSA, it should fund 70 percent of what is contributed to the CSA.

²Treas. reg. section 1.482-7T(c).

³Treas. reg. section 1.482-7T(g).

⁴Treas. reg. section 1.482-1(c).

⁵Treas. reg. section 1.482-7T(g)(7)(i).

⁶Treas. reg. section 1.482-7T(b)(1)(ii).

⁷Treas. reg. section 1.482-7T(a)(1).

⁸Treas. reg. section 1.482-7T(g)(7)(iii).

⁹Treas. reg. section 1.482-7T(g)(7)(v), Example 1.

 $^{^{10}}Id.$

| Table 1. 17.50% Discount (\$ million) | | | | | | | | | | | |
|--|---------|---------|---------|--------|--------|--------|---------|---------|---------|---------|----------------|
| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Years 11-30 |
| Revenue | \$0 | \$200 | \$300 | \$450 | \$675 | \$878 | \$1,141 | \$1,369 | \$1,643 | \$1,807 | |
| Routine Costs | \$0 | \$90 | \$135 | \$203 | \$304 | \$395 | \$513 | \$616 | \$739 | \$813 | |
| Return on Routine Costs | \$0 | \$5 | \$8 | \$12 | \$18 | \$24 | \$31 | \$37 | \$44 | \$49 | |
| Operating Cost and Cost Contributions | \$100 | \$140 | \$165 | \$130 | \$115 | \$149 | \$194 | \$233 | \$279 | \$307 | |
| Profit | (\$100) | (\$35) | (\$8) | \$105 | \$238 | \$310 | \$403 | \$483 | \$581 | \$638 | \$7,365 |
| Discounted Profit | (\$92) | (\$28) | (\$5) | \$60 | \$115 | \$128 | \$141 | \$144 | \$147 | \$137 | \$544 |
| Cumulative Discounted Profit | (\$92) | (\$120) | (\$125) | (\$65) | \$50 | \$178 | \$319 | \$463 | \$610 | \$747 | \$1,291 |

Sales increase by 30 percent per year in years 6 and 7 of the CSA, and 20 percent per year in years 8 and 9. They grow at 10 percent in year 10.

- Sales decline by 10 percent in year 11 and decrease by 5 percent per year beginning in year 12. From the description in the Treasury regulations, it was not clear whether sales were projected to decline by 5 percent each year from the prior year's revenue, or by 5 percent from the sales in year 11. If sales decline 5 percent each year from year 11 sales, revenue and profits fall to zero in 30 years. If sales decline by 5 percent per year from the prior year, the CSA continues to earn discounted profits into year 40 and beyond. For modeling purposes, I assumed the organization's sales declined by 5 percent per year from the prior year beginning in year 12, and I also assumed the CSA earned no material profits after year 30.
- Routine costs are 45 percent of gross sales each year. These routine costs include distribution activities in the markets served. In the RPSM approach, each participant in the CSA is entitled to earn a market rate return on these distribution activities. In the regulation's example, the firms are both entitled to earn a return of 6 percent of these routine costs each year.
- Operating cost contributions are equal to \$40 million per year in the first two years of the CSA, and \$65 million and \$70 million in years 3 and 4. After that, operating cost contributions are equal to 7 percent of revenue.
- Cost contributions are projected to be \$60 million in year 1, \$100 million in years 2 and 3, and \$60 million in year 4. After that, cost contributions are projected to be 10 percent of revenues.
- Future profits are discounted at a 17.5 percent annual rate. The Treasury regulations assumed that all cash flows occurred at the start of each

year, "for simplicity." While I understand the desire to keep the model simple, I thought it was more realistic to assume the cash flows occurred in the middle of a year, and modified the model accordingly.

The Treasury regulations do not provide a table or spreadsheet to show the calculations. However, they state that the present value of total profits (PVTP) is \$1.319 billion. Using the above assumptions, I have calculated a similar figure of \$1.291 billion, which is approximately 2 percent below the \$1.319 billion figure. While this 2 percent difference may be important to a taxpayer, the primary purpose of this article is to demonstrate how sensitive the Treasury regulations are to financial assumptions, and this \$1.291 billion figure can serve as a good starting point for that purpose. My calculations are shown in Table 1.

USP and FS need to allocate these profits based on the nonroutine contributions each has made. The example states:

After analysis, USP and FS determine the relative value of the nanodisk technologies contributed by USP to CSA (giving effect only to its value in FS's territory) is roughly 150 [percent] of the value of FS's marketing intangibles (which only have value in FS's territory). Consequently, 60 percent of the nonroutine residual divisional profit is attributable to USP's platform contribution.¹²

Thus, 60 percent of the \$1.291 billion needs to be paid to USP, and FS retains 40 percent. Using the figures I have calculated above, FS owes USP \$775 million for the value of intangible assets contributed to the CSA.

¹¹Treas. reg. section 1.482-7T(g)(7)(v), Example 1(iii).

¹²Treas. reg. section 1.482-7T(g)(7)(v), Example 1(iv).

Sensitivity of Discount Rate

To determine how sensitive these figures are to changes in financial assumptions, in Table 2 I made only one change to these assumptions. I increased the discount rate from 17.5 percent to 20.47 percent, an increase of 2.97 percentage points. This higher figure was the discount rate the Tax Court determined was appropriate in its 2009 *Veritas* decision.¹³

Veritas was a Silicon Valley headquartered firm that developed and marketed storage management software. It was acquired by Symantec in 2005. In 1999 Veritas's U.S.-based parent formed a CSA with its Irish subsidiary. In that year the subsidiary paid the U.S. parent \$6.3 million for preexisting intangibles contributed to the CSA. Veritas adjusted its buy-in valuation several times after that date, ultimately settling on a \$118 million buy-in.

The IRS challenged that figure, supported by an outside economist who calculated Veritas-U.S. should have received between \$1.9 billion and \$4 billion for the intangible assets it contributed to the CSA, eventually arriving at a \$2.5 billion valuation (Greenwald, 2010, p. 257). Before trial the IRS employed a second economist, John Hatch, who reduced the buy-in's value to \$1.675 billion (Greenwald, p. 259). Veritas challenged the IRS's figure, and the firm faced a high legal standard to win its case. Chung, Hustad, and Shapiro (2010) wrote: "The Tax Court, based on well-settled law, held that the IRS position is presumptively correct unless it is arbitrary, capricious and unreasonable" (p. 12). But the Tax Court ultimately concluded that Veritas proved its case, and determined the IRS was arbitrary, capricious, and unreasonable in enforcing the cost-sharing regulations in effect at that time. Though this dispute predated the IRS's investor model, both the IRS and Veritas used time value of money principles to discount future profits and value the buy-in.

The IRS and Veritas disagreed over what figure should be used to discount future profits. The IRS used a 13.7 percent figure in its calculations, while Veritas used the 20.47 percent rate. Both the IRS and Veritas used the capital asset pricing model (CAPM) to calculate the discount rate, but they disagreed on how the risk-free rate of return, the equity risk premium, and the beta should be calculated. In each case the IRS calculated a lower figure than did Veritas. For example, the IRS used the yield on a 20-year U.S. Treasury bond as the risk-free rate, while Veritas used the 30-day U.S. Treasury bill rate as the risk-free rate of return. The IRS used an equity risk premium of 5 percent, while Veritas used an 8.1 percent figure calculated by Ibbotson Associates. The IRS employed an industry beta,

while Veritas used a firm-specific beta. The Tax Court supported Veritas's position on each figure. Greenwald (2010) wrote:

On cross examination, Dr. Hatch acknowledged that he used the wrong risk-free rate. The court therefore found that Dr. Hatch had employed the wrong beta, the wrong equity risk premium, and thus the wrong discount rate with which to calculate Veritas-Ireland's requisite buy-in payment to Veritas. [P. 261.]

To determine how sensitive the IRS investor model is to discount rate changes, I thought it would be useful to use this higher rate. Both Veritas and the fictitious firm in the temporary cost-sharing regulations are high-technology firms producing advanced data storage products, so they are in similar businesses. The Tax Court determined this was the appropriate discount to use in that case, so this does not seem like an unreasonable figure to use for comparison purposes. In *Veritas*, the difference between that firm and the IRS was significantly larger (13.7 percent versus 20.47 percent). I made no changes to any other financial assumptions. Table 2 shows the impact of the higher discount rate.

As a result of this one change, the present value of total profits decreases from \$1.291 billion to \$995 million, a 23 percent decline. This would reduce payment from FS to USP from \$775 million to \$597 million, a reduction of \$178 million.

Changes to Revenue and Cost Assumptions

In Table 3, I changed two other financial assumptions. First, I reduced the revenue estimates by 10 percent each year. For example, the temporary costsharing regulations assume revenue will peak at \$1.8 billion in year 10. I've assumed revenue of \$1.62 billion that year. In the following table, each year the CSA's revenue is 10 percent below the IRS's financial estimates. Second, I have assumed that routine costs are 50 percent of revenue. The temporary cost-sharing regulations assumed they were 45 percent of revenue. I assumed the operating cost and cost contributions remain the same, and the market return for routine cost contributions is still 6 percent. I also used the 20.47 percent discount rate.

Both these changes will reduce the PVTP, but they do not appear to be extraordinarily large changes. It may be difficult or impossible for any firm to project financial results that accurately, particularly for a product that has not even been completed or released. As TEI (2005) and Keates, Muyelle, and Wright (2009) contend, it is very difficult for firms to project future financial results accurately, particularly when they are projecting results decades in the future. In this case, the firm is forecasting its financial results for 30 years. Forecasting revenue within 10 percent would, in my opinion, be an extraordinary achievement. Cost projections that are within 5 percentage points of the Treasury regulations' projections would also seem to be

¹³ Veritas Software Corporation v. Commissioner of Internal Revenue Service, 133 T.C. 297 (Dec. 10, 2009).

| Table 2. 20.47% Discount (\$ million) | | | | | | | | | | | |
|--|---------|---------|---------|--------|--------|--------|---------|---------|---------|---------|----------------|
| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Years 11-30 |
| Revenue | \$0 | \$200 | \$300 | \$450 | \$675 | \$878 | \$1,141 | \$1,369 | \$1,643 | \$1,807 | |
| Routine Costs | \$0 | \$90 | \$135 | \$203 | \$304 | \$395 | \$513 | \$616 | \$739 | \$813 | |
| Return on Routine Costs | \$0 | \$5 | \$8 | \$12 | \$18 | \$24 | \$31 | \$37 | \$44 | \$49 | |
| Operating Cost and Cost Contributions | \$100 | \$140 | \$165 | \$130 | \$115 | \$149 | \$194 | \$233 | \$279 | \$307 | |
| Profit | (\$100) | (\$35) | (\$8) | \$105 | \$238 | \$310 | \$403 | \$483 | \$581 | \$638 | \$7,365 |
| Discounted Profit | (\$91) | (\$27) | (\$5) | \$55 | \$103 | \$111 | \$120 | \$120 | \$119 | \$109 | \$381 |
| Cumulative Discounted Profit | (\$91) | (\$118) | (\$123) | (\$68) | \$35 | \$146 | \$266 | \$386 | \$505 | \$614 | \$995 |

| Table 3. 20.47% Discount, Lower Revenue Growth (\$ million) | | | | | | | | | | | |
|---|---------|---------|---------|---------|--------|--------|---------|---------|---------|---------|----------------|
| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Years 11-30 |
| Revenue | \$0 | \$180 | \$270 | \$405 | \$607 | \$790 | \$1,027 | \$1,232 | \$1,478 | \$1,626 | |
| Routine Costs | \$0 | \$90 | \$135 | \$203 | \$304 | \$395 | \$513 | \$616 | \$739 | \$813 | |
| Return on Routine Costs | \$0 | \$5 | \$8 | \$12 | \$18 | \$24 | \$31 | \$37 | \$44 | \$49 | |
| Operating Cost and Cost Contributions | \$100 | \$140 | \$165 | \$130 | \$103 | \$134 | \$175 | \$209 | \$251 | \$276 | |
| Profit | (\$100) | (\$55) | (\$38) | \$60 | \$182 | \$237 | \$308 | \$370 | \$444 | \$488 | \$5,634 |
| Discounted Profit | (\$91) | (\$42) | (\$24) | \$31 | \$79 | \$85 | \$92 | \$91 | \$91 | \$83 | \$292 |
| Cumulative Discounted Profit | (\$91) | (\$133) | (\$157) | (\$126) | (\$47) | \$38 | \$130 | \$221 | \$312 | \$395 | \$687 |

within the margin for error, particularly for an unproven product. When one considers the technological advances in the data storage industry over the past 30 years, and the changing business models in high-technology industries, it is hard to predict what changes we will see in the next three decades. Thus predicting profit margins seems to be a very challenging task.

When I used these new assumptions the PVTP falls to \$687 million, which is 47 percent below the original calculation of \$1.291 billion. Assuming that FS should pay 60 percent of the profits to USP, the buy-in's value decreases to \$412 million. Thus the buy-in is \$363 million lower than originally calculated. The figures are summarized in Table 3.

Value of Nonroutine Contributions

As mentioned, participants in a CSA using the RPSM are required to apportion nonroutine profits

based on the value that each participant contributed to the CSA. The temporary regulations state:

The relative values of the controlled participants' nonroutine contributions must be determined so as to reflect the most reliable measure of an arm's length result. Relative values may be measured by external market benchmarks that reflect the fair market value of such nonroutine contributions.¹⁴

Determining reliable benchmarks for the value of nonroutine contributions may be difficult. The regulations also state:

Alternatively, the relative value of nonroutine contributions may be estimated by the capitalized cost of developing the nonroutine contributions

¹⁴Treas. reg. section 1.482-7T(g)(7)(iii)(C)(2).

| Table 4. Assumptions | | | | | | | | | |
|--|--|--|---|----------------------------|--|--|--|--|--|
| | Present Value of Total Profits (PVTP) (in millions) | PCT Payment From FS to USP (in millions) | \$ Change in Payment to USP (in millions) | % Change in Payment to USP | | | | | |
| Treasury regulation assumptions, with my modifications. Assumes 17.50% discount rate. | \$1,291 | \$775 | | | | | | | |
| Discount rate increased to 20.47% from <i>Veritas</i> case. All other figures unchanged. | \$995 | \$597 | (\$178) | (23%) | | | | | |
| Revenue assumed to be 10% lower, and routine costs 5% higher. | \$687 | \$412 | (\$363) | (47%) | | | | | |
| USP entitled to 55% of PVTP, rather than 60%. | \$687 | \$378 | (\$397) | (51%) | | | | | |

and updates, as appropriately grown or discounted so that all contributions may be valued on a comparable dollar basis as of the same date.15

In other words, if the firm cannot determine the fair market value of the contributions, it may use the discounted cost to value each participant's contribution.

Based on this, it seems likely the IRS and taxpayer could reach different conclusions concerning the value each participant contributed to the CSA, particularly if they value intangible assets using market benchmarks, which may not produce unambiguous, precise figures. In the Treasury regulations, firms would have to compare the value of the technologies developed by USP with the value of FS's marketing intangibles. I believe it is rather difficult to compare the value of technology and marketing intangibles, and reasonable professionals are likely to reach different conclusions concerning their value. Suppose the MNE determines that 55 percent of the nonroutine profits should be paid to USP, rather than 60 percent. Again, I believe this is within the margin for error, particularly since the market value of intangible assets is inherently difficult to measure. If we make that assumption, then the buy-in decreases to \$378 million, which is a 51 percent reduction from the original calculation.

Table 4 summarizes the results of the various assumptions made in this article.

Conclusion/Recommendations

Based on the above, it appears CSA buy-ins are very sensitive to comparatively minor changes to the financial assumptions. Using the original financial assumptions, FS owed USP \$775 million. When I used the Veritas discount rate of 20.47 percent and made comparatively minor changes to revenues, costs, and the

 $^{15}Id.$

percent due USP, the buy-in's value was reduced by 51 percent. Of course more optimistic financial assumptions and lower discount rates would produce significantly higher CSA buy-ins.

Such fluctuations may not be the result of firms manipulating financial projections to achieve tax objectives. It is extremely difficult to accurately project future financial results decades into the future. particularly in rapidly changing high-technology and pharmaceutical industries. Relatively modest differences in financial assumptions can produce large differences in present value calculations, and thus CSA buy-ins. This observation will not surprise anyone who has modeled future financial results. Net present value figures and internal rates of return are very sensitive to minor changes in financial assumptions.

Veritas also supports this conclusion. The differences between the IRS and the taxpayer were quite large in that case. As mentioned, the taxpayer valued the buy-in at \$118 million, and the court ultimately agreed with that firm's position. The IRS finally settled on the \$1.675 billion figure that was rejected by the Tax Court. Thus the IRS calculated a buy-in that was over 14 times the figure determined by the taxpayer.

The magnitude of these differences is troubling; both taxpayers and the IRS would benefit from more clarity and certainty concerning a firm's tax obligations. Despite this, the IRS seems very committed to its investor model and shows no indication that it is willing to make any material changes to it. While it is unlikely the IRS will make any major changes to its regulations in the foreseeable future, it may be worthwhile considering whether the IRS can make any improvements to these regulations.

I believe the temporary Treasury regulations can be improved by providing clearer guidance concerning how firms should determine an appropriate discount rate. The 2009 temporary cost-sharing regulations may give better conceptual guidance on discount rates than

do the 2005 proposed regulations, by placing less emphasis on the weighted average cost of capital and allowing firms to determine project-specific discount rates that reflect risk more appropriately. But the *Veritas* case demonstrates the practical difficulties taxpayers and the IRS may have agreeing on discount rates. A discount rate difference of nearly seven points can create enormous differences in present value calculations. The IRS and Veritas could not even agree on how any of the three components of CAPM (the risk-free rate, the equity risk premium, or the appropriate beta) should be determined.

The temporary regulations provide very little practical guidance concerning discount rate calculation. IRS economist Michael McDonald acknowledges the IRS's temporary regulations are quite general, saying: "But the guidance beyond that is the old, 'choose the appropriate rate,' he said" (Stewart, 2011, p. 337). The discount rate is one of the most important factors in the investor model, and the IRS could provide better direction than this. When the investor model was first announced, TEI thought this would be a significant problem. It wrote: "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). The 2009 regulations have not improved practical guidance on this critical issue.

The regulations could specifically state that taxpayers may want to use CAPM to determine discount rates. Both the IRS and Veritas used CAPM in that case. The regulations could specifically identify what methods firms should use to calculate the risk-free rate of return, the equity risk premium, and a CSA's beta. In the Veritas decision the Tax Court determined that firm's approach was superior to the IRS's, and the conclusions in that decision might provide a good starting point for Treasury regulations on this topic. My purpose here is not to state exactly how those regulations should read, but to suggest there are ways the IRS could provide better guidance on this important issue. Taxpayers deserve clearer direction on discount rates, and the IRS's "choose the appropriate rate" approach is far too vague. Without improved guidance on discount rates, I am not sure why a firm would want to structure an IRS-qualified CSA. Further, asking a Tax Court to rule on the appropriate discount rate, which it did in the Veritas case, does not seem to be the best process to resolve such issues.

Second, I am not certain the IRS's investor model achieves what it purports to do: simulate the approach investors use to make these decisions. Do businesses and investors place much reliance on financial forecasts that extend decades into the future, particularly for products that have not been developed and introduced? My experience tells me that they do not do so. TEI is not overstating its case when it says most firms do not have much confidence in long-range forecasts because of their unreliability. To reach the Treasury regulations'

PVTP figure of \$1.3 billion, I assumed the CSA was generating sizable profits 30 years into the future. It seems unlikely investors would rely on speculative, long-range financial forecasts and place much weight on such projections. The IRS should acknowledge long-range financial forecasting is a formidable task, and not assume that inaccurate forecasts are necessarily the result of tax planning strategies. In contrast, the OECD's Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations (2010) acknowledges longrange financial forecasting and valuing intangible assets are inherently difficult to do. When discussing how intangible asset contributions to CSAs should be valued, that document states: "It is unlikely to be a straightforward matter to determine the relative value of each participant's contribution" (p. 224).

Birnkrant (2009) made an excellent point when he said:

As a practical matter, the future use of CSAs will depend on the Service's approach to enforcement of these Temporary Regulations. Implementing a CSA will impose unacceptable risks, unless IRS teams acknowledge the intended flexibility and give appropriate credit for contributions of non-U.S. participants. In this regard, the Service's current approach of demonizing CSAs, such that field economists and international examiners treat a CSA as a ruse to avoid proper U.S. taxation of valuable U.S. platform contributions and treat platform contributions of non-U.S. participants as completely lacking in value, is not encouraging. [P. 306.]

The regulations are too vague on discount rates and give the IRS broad powers to enforce the regulations. Based on Birnkrant's observations, this is not likely to encourage participation in IRS-qualified CSAs.

Naegele (2010) also believes firms will not want to form CSAs, given the new rules. He writes:

The primary problem with the new Regulations is that while Treasury's intention was to close the loophole in the old Regulations, the New Regulations are so restrictive and overzealous in their attempt to fix the problem that many companies will not enter into cost sharing agreements in the first instance. As a result, U.S. multinationals are at a competitive disadvantage compared with other countries, which will result in less overall U.S. revenue and subsequently less capital to tax. These Regulations, therefore, fail to achieve their purpose of generating more revenue for the U.S. Treasury. [P. 59.]

It will never be easy for firms to project financial results accurately, but the Treasury Department does have the power to provide better guidance concerning how firms should determine discount rates when valuing a buy-in. It should do this. Further, when enforcing its regulations the IRS should not assume forecasting

errors are necessarily the result of tax avoidance strategies. IRS economist Michael McDonald said: "where above-market returns were just due to the cost-sharing risks panning out, there should not be an adjustment" (Nadal, 2009, p. 681). While McDonald's statement is both accurate and encouraging, the IRS's challenge is to convince firms it will actually enforce its rules in this manner. Firms may be reluctant to form new, IRS-qualified CSAs unless these issues are addressed.

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