

COST SHARING AGREEMENT: A TUG OF WAR BETWEEN  
THE IRS AND MULTINATIONAL CORPORATIONS

by

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## ABSTRACT

In consideration of intangible assets' growing importance in deriving the value for many businesses, it is important to account for these assets' potential tax risks in order to measure their true benefits. One area of tax related to intangible assets under the scrutiny of U.S. transfer pricing and international tax rules is the cost sharing agreement. When related subsidiaries of the same international corporation enter into a cost sharing agreement, they pool their resources together to develop intangible assets for common use. During this process, there are often conflicts between multi-national companies (MNCs) and the Internal Revenue Service (IRS) in assigning the correct amount of how much subsidiaries have to pay one another. Both parties care about this because assigning costs of asset development incorrectly can lead to base erosion and profit shifting behavior for MNCs, affecting both the amount of tax revenue collected by the IRS the and bottom line of MNCs. This thesis examines the causes of this conflict by analyzing court cases between the IRS and different MNCs and synthesizing common conflict points. My results show that potential conflicts between the IRS and MNCs can stem from either the matter of the law or the financial inputs used in modelling the assets' future costs and benefits. While the IRS has imposed increased vigor on one of these financial inputs, namely the discount rate, it has not addressed other ambiguous legal areas such as those related to stock-based compensation. From a tax perspective, this thesis indicates that there are significant improvements that the IRS can make to clarify its guidance for participants in a CSA.

### Keywords

Transfer pricing, MNC, IRS, cost sharing agreement, intangible asset, stock-based compensation, court cases, profit shifting, discount rate

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Cost Sharing Agreement: A Tug of War  
Between the IRS and Multinational Corporations

We live in an age where company value is derived not only from goods and services, but also from valuable intangible assets. A few examples of intangible assets include patents, trademark, goodwill and copyrights. Except for goodwill, intangible assets such as operational and product technology as well as other patents are often covered in a cost sharing agreement. The share of the intangible assets is on the rise in the USA and as a result, intangible assets have become the focus of many businesses. In 2018, intangible assets amount to 70% of corporate balance sheets and 53% of the total value of the FTSE 1001 (Peyman, 2018). Becoming a larger part of the balance sheet also means that corporations have to pay increasingly more attention to the potential tax liability and risks that arise from the process of managing and generating revenues from their intangible assets. Not only have intangible assets become more relevant in terms of value, the way these assets are created can pose potential financial and legal issues for corporations. As organizations become more global and their supply chains become longer and more complex, it is often the case that intangible assets are jointly developed by a multitude of related partners across the supply chain (McDonald, 2017). In order to successfully enter into the joint development process, these parties often enter into cost sharing agreements to share development costs of these intangibles. Given the growing importance and complexity of intangibles, it is critical for companies and relevant tax authorities to mutually agree on a set of assumptions when evaluating these assets. That way, they can reasonably allocate the costs borne by each party both from a value chain perspective and their responsible tax authorities. However, due to complexities related to business operations and the importance of intangible assets, such harmonious agreement is often not the case.

One way to provide more insight into this area of conflict in the cost allocation process is to consult the field of transfer pricing and analyze the specific regulations related to the IRS' approach to valuing the potential benefits and costs of the intangible assets' development process. So as to successfully address the question of conflict between the IRS and taxpayers, the following research questions are developed:

1. How have the Section 482 Treasury Regulations issued in 2011 changed the IRS' approach to cost sharing arrangements, particularly with respect to valuing platform contributions?
2. How have these changes affected the IRS-taxpayer conflicts that arise from the cost sharing agreements?

## **BACKGROUND**

A chief concern of corporations is determining how to maximize their profits. In addition to the traditional levers that corporations can pull, such as increasing sales and reducing costs, multinational corporations also have the option of shifting profits to lower tax jurisdictions to lower their effective tax rates. The effects of efficient international tax planning can be significant, as larger multinational corporations have reduced their effective tax rates an average of 4 to 8.5 percentage points relative to non-multinational firms, and the estimated tax revenue loss for all Organization for Economic Cooperation and Development (OECD) and G20 countries is estimated to total about \$0.9-2.1 trillion USD for the period 2005-2014 (Johansson et al., 2017). Given this evidence, it is not surprising that both corporations and tax authorities pay attention to international tax reporting activities and tax shifting behaviors.

One concept related to the activities of profit shifting is transfer pricing. This concept relates to the price that related parties, or parties under the same control, charge for providing one

another with goods and services. Goods and services include production machinery, and marketing or research and development (R&D) services. A fundamental guiding principle for all transactions is the arm's length requirement for transactions between related parties. This principle essentially means that these related/controlled parties need to deal with one another as if they are dealing with uncontrolled entities interested only in their own economic gains.

### **Cost Sharing Agreement (CSA)**

When related parties jointly develop assets, it is more difficult for them to correctly allocate the development costs related to intangible assets than tangible assets. This difficulty stems mainly from the complexity of valuing and consequently allocating the cost of intangible assets. One reason why it is difficult to value intangible assets is that due to the different international legal protection afforded to intangible assets. It is often difficult to navigate between at least two tax jurisdictions in a transfer pricing case. Intangible assets also often generate values not just in isolation, but by interacting with other tangible and intangible assets (Brauner, 2008). Therefore, attempting to evaluate this “synergistic” relationship among variables may prove challenging.

One vehicle that the IRS has developed to equip companies with a way of treating the support activities related to these intangibles is the cost sharing agreement (CSA). In the broadest sense, a cost sharing agreement can encompass any agreement between two persons (or entities) in sharing the development costs and consequently reaping the potential benefits of an asset. A cost sharing agreement can be either qualified or non-qualified. In the context of the Internal Revenue Code Section 482 and the scope of this thesis, however; the definition of a qualified CSA is narrowed down on the following aspect:

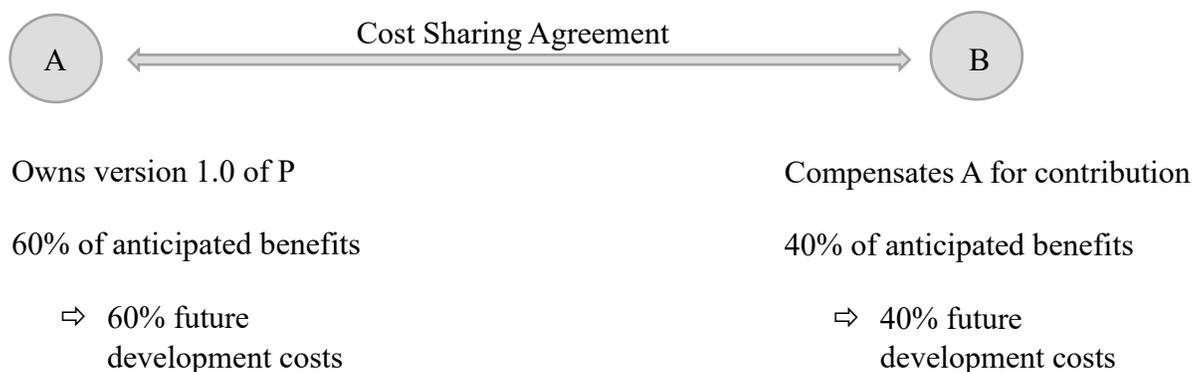
- The agreement is between two related parties (i.e. two subsidiaries belonging to the same company).

- The type of assets considered for these agreements are intangible assets (“Tax GO pages”).

In addition to these restrictions, parties to this agreement must also satisfy other criteria for the agreement to be considered as such. Some of the criteria include a need for all parties to share the whole cost of developing the intangible asset. This cost should account for both ongoing development activities from the effective date of the agreement as well as the value of existing resources contributed to the intangible assets’ development process. The parties involved in this agreement should also be able to gain exclusive rights to the use of the developed intangibles (“Tax GO pages”).

There are a few reasons why companies would choose to enter a cost sharing agreement instead of entering into a licensing agreement or directly transferring intangible assets to another related party. One reason is that any co-development activities conducted after the effective date of a cost sharing agreement are not subjected to uncertainty and potential controversy with the IRS when determining the arm’s length royalty rates (“Tax GO pages”). This source of conflict arises from the fact that royalty payments need to comply with the continually monitored principle. This principle requires parties to make royalties payments that account for any change in the income generated by the intangible property (“Portfolio 886-2<sup>nd</sup>”). A cost sharing agreement avoids this source of complexity and instead limits the potential sources of conflict with the IRS to: “what costs are shared, how costs are shared”, issues related to entering and leaving a CSA, as well as other administrative requirements (“¶3600.03.G.”). Another potential benefit for companies entering into a cost sharing agreement is possible tax savings for the overall company when there is a mismatch between royalty payments and cost sharing payments that result in income being shifted to a subsidiary in a lower-tax jurisdiction area (Dye, 2008). However, one should be aware

that entering into a cost sharing agreement requires parties to bear developing risks themselves instead of transferring them to a third party, as in the case of licensing for example. As a result, parties should exercise careful consideration and analysis before undertaking such risks. An explicit example (adapted and modified from Reg. Sec. 1.482-7) that illustrates one case of parties entering into a cost sharing agreement is as follows:



*Figure 1. A and B entering into a Cost Sharing Agreement*

A, a software company, has developed and currently owns version 1.0 of a productivity software P. A has entered into a cost sharing agreement with B, its subsidiary, to share the costs of developing future versions of P. Version 1.0 of P that A currently owns is considered a useful resource that could contribute to the development process of future versions of this software. As A is making version 1.0 available for use in the development process, A should be compensated by B for this contribution. In addition, A and B expect to gain 60% and 40% of the benefits respectively from future versions of P. As a result of this prediction, A should contribute 60%, and B 40% of the development costs for the software.

Focusing on B in this example, there are two main types of payments that B needs to make: one is to A for its contribution of existing software, and the other is in relation to the software development costs in the future proportionally to its expected profits. The next two sections will

focus on differentiating the nature of these two main forms of payments and outline some accepted methods for calculating their values.

### **Cost Sharing Transaction (CST).**

As illustrated by A's and B's payments of 60% and 40% of the development costs above, a Cost Sharing Transaction (CST) is a payment made by the parties pursuant to a cost sharing agreement. These payments are necessary to compensate for the costs of developing intangible assets incurred after the inception of a cost sharing agreement. This payment needs to be in proportion to each party's reasonably anticipated benefits. In the example in figure 1, A anticipates reaping 60% of the benefits created by new versions of the software, and thus is expected to pay 60% of the development costs.

### ***Method for calculating CST – Reasonably Anticipated Benefits (RAB) Shares.***

Calculating the value of CST payments using the anticipated benefits, as illustrated in figure 1, is the only accepted method highlighted in Reg. Sec. 1.482-7. In general, the process of computing this relative proportion of benefits for each party should consider the best available information at the time of the agreement and should reflect the estimated relative benefits over the entire period of utilizing and gaining benefits from the developed intangibles. The amount of anticipated benefits can be calculated on a direct basis, where incremental benefits such as cost savings and increased sales directly attributable to the developed intangibles are used. However, the benefits are more commonly calculated on an indirect basis, where changes in measures such as sales and operating profit of parties are assumed to be largely attributable to the developed intangibles, and the relative anticipated benefits are then calculated accordingly. One example that illustrates this method is as follows (adapted from Reg. Sec. 1.482-7(e)(2)(ii)):

C and D are developing intangibles that enhance product P and make the production process for P more efficient. This new feature will enable both C and D to command a higher price for P. After market analysis, C anticipates an increase of \$20M in the present value of revenue, while D anticipates only a \$10M increase. In order to equip the existing product P with this newly researched feature, both C and D need to invest \$5M in their current production capacity. However, as they have also made improvements in their production process' efficiency, each party is able to save \$2M in production costs. Figure 2 shows C and D's costs and benefits as a result of utilizing the intangibles:

|                                 | C                      | D                     |
|---------------------------------|------------------------|-----------------------|
| Increase in Revenue             | +\$20M                 | +\$10M                |
| Production Cost                 | -\$5M                  | -\$5M                 |
| Cost Saving                     | +\$2M                  | +\$2M                 |
| Reasonably Anticipated Benefits | \$17M                  | \$7M                  |
| Relative Benefits               | $17 / (17+7) = 70.8\%$ | $7 / (17+7) = 29.2\%$ |

*Figure 2. Calculation table for C and D's reasonably anticipated benefits*

### **Platform Contribution Transaction (PCT)**

Another main type of payment within a cost sharing agreement is a platform contribution transaction (PCT). Looking again at the earlier example of A and B entering into a cost sharing agreement to develop future versions of a software, one can consider A's version 1.0 of software P to be a platform contribution. On a broader level, a platform contribution includes any resources, capability, or right that is reasonably anticipated to contribute to the intangible development activity (IRS Reg. Sec. 1.428-7).

While there are a few different methods for evaluating the value of a PCT, in general, they all need to comply with the fundamental investor's approach to achieve an arm's length result. This principle focuses on the aggregate values of platform contributions made by all parties and

requires that this investment should yield a return consistent with the riskiness of the cost sharing agreement as a whole.

Another principle that all methods must comply with is similar to the concept of opportunity cost in the field of economics. Essentially, this principle emphasizes the idea that an entity will only choose to enter into a cost sharing agreement if it does not have any better option. Therefore, the anticipated benefits for each party should not be less than the anticipated profits of any alternative option such as licensing (“portfolio 552-2<sup>nd</sup>”). This principle is known as realistic alternatives principle and is further emphasized by the Congress recently by incorporating it in the 482 statute.

The main methods of calculating the charge in a PCT are:

***Comparable uncontrolled transaction (CUT):***

This method is used to evaluate whether the amount charged in a PCT is at arm’s length by looking at comparable transactions among independent and external parties. Whether a transaction is comparable or not depends on similarities in contract terms in the cost sharing agreement, such as similarity of scope and length of commitment as well as allocation of risks among the different resources.

***The income method:***

This method specifically focuses on satisfying the opportunity cost concept outlined in the paragraph introducing PCT above and determines whether the charge for a PCT is arm’s length by looking at the potential benefits of each party’s next best alternative. If the opportunity cost concept holds, the potential benefits for each party’s next best alternative should be equal or less than the potential benefits for each party under the CSA alternative, after adjusting for the PCT charge

among the parties. This method becomes less reliable if more than one participating party brings nonroutine contributions into the CSA (“Portfolio 552-2<sup>nd</sup>”).

***The acquisition price method:***

One way a party in a cost sharing agreement makes a platform contribution is by acquiring another company and using all the resources of this newly acquired entity towards the development process. Assuming that none of this acquired entity’s resources are expected to contribute to activities outside the CSA, we can assume that the value of this party’s contribution will be equal to the acquisition price for this acquired entity.

***The market capitalization method:***

This method is applicable when substantially all of a party’s resources are used as platform contributions to a cost sharing agreement. Under this method, the total value of this party’s contribution to the agreement is calculated by referring to its average market capitalization, usually over a period of 60 days (Reg. Sec. 1.482-7).

***The residual profit split method:***

Under this method, the aggregate amount of profits generated from the intangible resources are allocated to related parties in two steps. First, related parties are compensated for their routine contribution, or contributions that can be reasonably duplicated on a functional basis by other companies in the economy and do not command a higher rate of return than the market rate (Investopedia). Second, the residual profit is allocated based on the parties’ nonroutine contribution, or contributions that are unique, valuable and can command a higher return in the market.

*Unspecified method:*

Other methods could also be used provided that they comply with the different economic concepts such as opportunity cost and investor's model as outlined at the beginning of this section.

### **HISTORY OF TAX PROVISIONS RELATED TO CSA**

While proposed regulations related to cost sharing agreements were originally put in place by the Treasury Department in 1966, not until 1986 did the regulations required a party's contribution to the intangible assets' development process match the potential income it can gain from such an intangible. In addition, the 1992 proposed regulations also included regulations related to buy-in and buy-out methods, both of which are essentially ways for taxpayers to enter or leave a cost sharing agreement by making or receiving appropriate payments in relation to other parties in the cost sharing agreement. The buy-in concept, in turn, laid the groundwork for the concept of platform contribution transactions (PCT) ("Portfolio 890-1<sup>st</sup>"). This concept of PCT is not only different from the original buy-in payment in name but in the fact that the IRS has considered comments regarding the complexity of the original buy-in payment framework in developing the PCT concept.

2005 marked an important development in CSA regulation as the IRS introduced the investor model. This model insists that the investment should yield a return consistent with the riskiness of the cost sharing agreement as a whole. 2009 furthered the application of the investor model through more guidance on the scope and use of cost sharing methods to measure the potential benefits shares of each participant within a cost sharing agreement.

A significant change in the 2011 Final Regulation was an increase in rigor related to discount rates used to calculate the present values of streams of benefits for participants in a cost sharing agreement ("Portfolio 890-1<sup>st</sup>"). Recall that the value of a PCT payment is equal to the

difference between (1) the pre-PCT Payment present value of the CSA alternative and the (2) present value of the licensing alternative (Zollo, 2012). When choosing the discount rate for these two scenarios, taxpayers could apply a higher than expected rate for the CSA alternative, and lower than expected rate for the licensing alternative (Zollo, 2012). This would in turn lead to profit shifting behaviors, retaining more profit to the party having to pay these PCT payments. To address this behavior, the IRS has introduced the concept of “implied discount rate”. The implied discount rate is the rate at which the present value of the difference between (1) and (2) equals the value of the PCT payment. Essentially, this implied discount rate should be consistent with the appropriate discount rate for activities with similar risks, assuming that the IRS can find such example activities (Zollo, 2012).

Among the issues not addressed under the 2011 regulation changes were those related to stock-based compensation. More specifically, it was still not decided with certainty whether such costs should be included in cost sharing agreements for related parties (Zollo, 2012).

Recently, the Tax Cuts and Jobs Act of 2017 addressed the changing global landscape by expanding the definition of intangible property and placing an emphasis on aggregate valuation of intangible property. All these regulatory changes have posed unique challenges for taxpayers in adhering to the evolving and oftentimes ambiguous CSA regulations. Such challenges are the focus of the next section (“Portfolio 890-1<sup>st</sup>”).

## **LITERATURE REVIEW**

### **Introduction**

Throughout the development process of CSA-related regulations, there have been commentaries on the potential complexities regarding their enforceability.

## **PCT Payment**

The different methods used for determining the value of PCT payments for contributing intangibles to a CSA all have significant valuation flaws (Levey, Miesel, Garofalo, 2001). This issue is echoed by Hatch (2005), who highlights two economic issues related to the IRS' PCT payment rules. The first issue relates to the difficulty for two unrelated parties (buyer and seller) to agree on the actual amount of platform contribution payment due to different expectations and assumptions in their valuation models. The second issue relates to possible double-taxation for the seller, hindering the ability for two parties to agree on a PCT payment. Additional reasons why parties often do not agree on PCT payments include a lack of comparable intangibles and difficulty in assessing the different properties and potential benefits of the intangibles in question (Levey, Miesel, Garofalo, 2001).

Deciding on a mutually agreeable PCT payment between two parties is only the beginning of the challenge, however. The IRS' commitment to the investor model and restriction on discount rates means that taxpayers will bear a greater burden of proof in demonstrating that they have predicted the potential benefits from sets of contributing intangibles throughout the lifetime of the CSA engagement and that they have used an acceptable discount rate in measuring these benefits (Dalton 2012).

## **CST Payment**

While the method of assigning payments to related parties in relation to their reasonably anticipated benefits (RAB) is theoretically straightforward, there can be details that need fine-tuning with respect to how the method is carried out.

Estimating the future potential benefits cannot be carried out in isolation. In fact, there is often a line of ambiguity in deciding whether a source of benefit stems from existing intangibles

or future intangibles developed after the inception of a CSA. Straddling this line means that it is possible for the IRS to double count the amount of tax liability from the taxpayers. The IRS does this by extrapolating the cash flows too far into the future when calculating the PCT payment for existing intangibles and including the same financial benefits when calculating reasonably anticipated benefits for future developments activities of intangibles (Schrotenboer 2015).

The changing utility of existing intangibles throughout the lifetime of a CSA can also affect how RAB shares are calculated. When there are additional platform contributions contributed to a CSA, taxpayers can either combine the newfound benefits into one flow of revised RAB shares or treat the additional benefits as separate RAB shares flowing from the same CSA (Khripounova, 2018). In treating additional benefits as a separate stream, however, taxpayers until recently have often faced adjustments into a single aggregate RAB share by large business and international audit teams (Mantegani, 2018). These adjustments could make it more complex and expensive for taxpayers to comply through increased overhead costs and tax liability.

## **Conclusion**

The examined commentaries above confirm that “the devil is in the details” for CSA regulations. While the methods for evaluating these payments in a CSA can seem straightforward, there are potential conflicts arising from differences in assumptions and regulation interpretation among different parties. I now turn to examining past cases related to CSA regulations to determine which areas of the regulations are most likely to cause conflicts between taxpayers and the IRS.

## **Hypotheses**

H1: The main sources of conflict that arise between taxpayers and the IRS are due to different economic assumptions among the different parties.

H2: The IRS' changes to CSA regulations in 2011 have not addressed the sources of these conflicts in a way that makes it less likely for taxpayers to be challenged by the IRS.

## ANALYSIS AND RESULTS

### Review of four relevant cases of CSA

The key court cases and tax years examined in this thesis include:

- Xilinx Inc. & Subsidiaries v. Commissioner – 1997 - 1999
- Altera Corporation and Subsidiaries v. Commissioner – 2004-2007
- Veritas Software Corp. & Subsidiaries, et al. v. Comm. – 2000 - 2001
- Amazon.com Inc. and Subsidiaries v. Commissioner – 2005-2006

| Case Name                    | Stage of Litigation | Key Disagreement                                   | IRS' Suggest Solution                       | Taxpayer's Solution                             | Tax Court Decision             |
|------------------------------|---------------------|--|---|---|--------------------------------|
| Xilinx Inc.                  | Settled             | Whether to include stock-based compensation in CSA | Stock-based compensation should be included | Stock-based compensation should not be included | Taxpayer's position is correct |
| Altera Corporation           | Appeal              | Whether to include stock-based compensation in CSA | Stock-based compensation should be included | Stock-based compensation should not be included | Taxpayer's position is correct |
| Veritas Software Corporation | Settled             | Method used to calculate buy-in payment            | Income method                               | CUT method                                      | Taxpayer's position is correct |
| Amazon.com Inc.              | Settled             | Method used to calculate buy-in payment            | Income method                               | CUT method                                      | Taxpayer's position is correct |

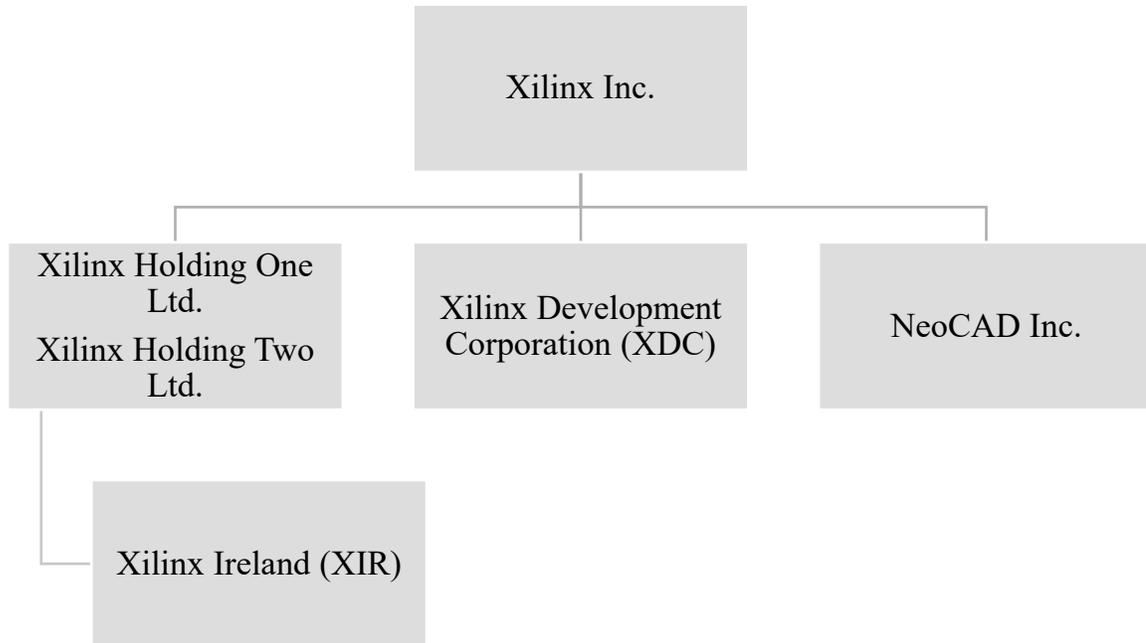
Figure 3. Summary Table of Court Cases

**Xilinx Inc. & Subsidiaries v. Commissioner (Tax Years 1997-1999)****Nature of Conflict**

Overall, the issue is debate is whether Xilinx, Inc. should include its employee stock options (ESO) costs as a part of the cost sharing agreement that it enters into with Xilinx Ireland, a foreign subsidiary.

**Case Summary*****Xilinx Inc. and Xilinx Ireland Overview***

Xilinx Inc., researches, develops, manufactures, markets, and sells field programmable logic devices, integrated circuit devices, and other development software systems. It is the parent of a group of subsidiaries: Xilinx Holding One Ltd., Xilinx Holding Two Ltd., Xilinx Development Corporation (XDC), NeoCAD Inc., Xilinx Ireland (XIR), and Xilinx International Corporation. XIR was established in 1994 and is owned by Xilinx Holding One and Two. A summary organizational chart can be seen below.



*Figure 4. Xilinx Inc. Organizational Structure*

Overall, the purpose of XIR was to increase Xilinx's market presence in the European region.

#### ***Cost Sharing Agreement***

On April 2, 1995, Xilinx Inc and XIR entered into a Technology Cost and Risk Sharing Agreement (CSA). According to this agreement, all future technology developed by either would be jointly owned. Both parties agreed to share direct costs, indirect costs, as well as intellectual property rights acquiring costs. The proportion of costs shared by each party is dependent on the expected benefits to be received from the developed intangibles. The relative proportion of relative benefits will be re-evaluated to maintain the CSA's accuracy in cost allocation.

#### ***Employee Stock Option (ESO)***

In April 1998, Xilinx's 1997 Stock Option plans replaced the original 1988 Stock Option plan. In this 1997 plan, there are a total of three types of stock options provided: incentive stock

options (ISOs), non-statutory stock options (NSOs), and employee stock purchase plan (ESPP purchase rights). In 1997, the vesting period required for these options was four (4) years.

Both Xilinx and XIR employees can take advantage of these ESO, however each entity needs to be responsible for the ESO costs of its own employees. In March 1996, Xilinx, Inc. and XIR entered into a stock option intercompany agreement to allow XIR employees to benefit from ESO, provided that XIR bears this cost. As a result, Xilinx did not include ESO-related costs for its research and development personnel when determining the costs allocation in the CSA agreement with XIR.

### ***Conclusion***

The IRS issued a notice of deficiency and determined that according to Reg. Sec. 1.482-7(d), the value of these ESOs should have been included in the cost allocation process. However, the Tax Court disagreed. The Court reasoned that according to Reg. Sec. 1.482-1(a)(1), unrelated parties would not share ESO value determinants such as the spread or grant date value for fear of having stock prices being unfairly manipulated by the other party. As a result, in abiding to the arm's length rule, the Tax Court determined that related parties do not have to share their ESO costs either.

### **Altera Corporation and Subsidiaries v. Commissioner (Tax Years 2004-2007)**

#### **Nature of Conflict**

Overall, the main issue at debate was whether Altera U.S. and its subsidiary Altera International need to share employees' stock-based compensation cost in their qualified cost sharing agreement cost allocation process.

## **Case Summary**

### ***Altera Corporation and Altera International Overview***

Altera Corporation is a group of entities that files consolidated U.S. tax returns. The relevant parties in this case are Altera Corporation. (Altera U.S.), a Delaware corporation and Altera International (AI), a Cayman Islands corporation. AI is a foreign subsidiary of Altera U.S.

Altera Corporation develops, manufactures, markets, and sells programmable logic devices (PLDs) and related hardware, software, pre-defined design building blocks for use in programming the PLDs.

### ***Agreements***

On May 23, 1997, Altera U.S. and Altera International entered into two concurrent agreements:

- (1) Master Technology License agreement: in this agreement, Altera U.S. licensed to Altera International the right to use and generate benefits from of the Altera U.S.' intangible property related to PLDs.
- (2) Technology R&D cost sharing agreement (CSA): in this agreement, both parties agree to pool resources to conduct research and development (R&D) activities using pre-CSA intangible property from May 23, 1997 – 2007.

### ***Stock Options and other Stock-based Compensation***

During the tax years 2004-2007, Altera U.S. granted stock options and other stock-based compensation to some of its employees, including those who performed R&D activities as a part of the CSA. This portion of stock-based compensation was not included in the total cost pool to

be shared as per the CSA. The IRS issued a notice of deficiency and increased the amount of payment Altera International had to make to account for the stock-based compensation costs Altera U.S. incurred. The IRS cited Reg. Sec. 1.482-7(d)(2), which requires related parties in a CSA to share stock-based compensation costs to achieve arm's length result. However, because the IRS could not provide concrete evidence of unrelated parties sharing this information and that sharing stock-based compensation indeed conforms to arm's-length standard, the Tax Court sided with Altera. The Court concluded that the related regulation was not valid in upholding the arm's-length standard.

In July 2018, the Ninth Circuit initially reversed this decision by the Tax Court, requiring related entities to share the cost of stock-based compensation in cost sharing agreements (Kassam, 2018). However, due to the death of Judge Reinhardt, who died before the opinion was released, the opinion was withdrawn and set for re-decision with Judge Susan Graber (American Bar Association, 2018). Many law professors sided with the IRS in this case, citing that comparable transactions are unreliable in determining whether parties should share stock-based compensation. This is because independent parties do not enter into cost sharing agreements, reducing the reliability of any comparable transactions found (Kassam, 2018).

### **Veritas Software Corp. & Subsidiaries, et al. v. Commissioner. (Tax Years 2000-2001)**

#### **Nature of Conflict**

The main conflict of the case stems from the different inputs that Veritas Software Corporation and the IRS used in computing the amount of buy-in payment (the concept later modified and renamed as PCT payment under 2005 Proposed Regulations) (“Portfolio 890-1<sup>st</sup>”).

## Case Summary

### *Overview of Veritas U.S. and Veritas Ireland*

Veritas U.S. develops, manufactures, markets, and sells advanced storage management software products. In July 2005, Veritas U.S. was purchased by Symantec Corp. (Symantec) and become one of Symantec's wholly-owned subsidiaries.

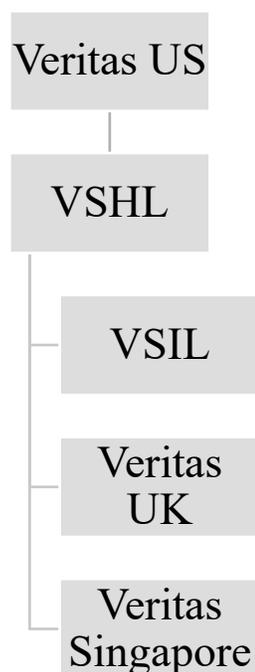
During the tax years in questions, Veritas U.S. has two main lines of products:

- Commercial Product: Backup Exec, targeted to small businesses
- Enterprise Products: NetBackup, Volume Manager, File System, Cluster Server, Foundation Suite. These products are targeted to larger businesses

Channel of distribution: direct sale or through original equipment manufacturers (OEMs), distributors, and resellers. Some OEMs include HP, Dell Products, L.P. among others. These OEMs pay Veritas U.S. royalty fees to sell its software. Sell commercial product through distributors and resellers.

This industry is very competitive. As a result, at the time of CSA, the average useful life for Veritas U.S.' products were 4 years.

In 1999, the EMEA and Asia Pacific and Japan (APJ) region represented growth opportunities for Veritas U.S. As a result, the company decided to establish a headquarter for these regions in Ireland. This entity was called Veritas Software Holding, Ltd. (VSHL), an Irish corporation and resident of Bermuda. An organization chart of Veritas U.S. is shown below.



*Figure 5. Veritas U.S.' organizational structure (not exhaustive)*

From Figure 4, it can be seen that Veritas U.S. owns VSHL, which in turn owns Veritas Software International, Ltd. (VSIL), Veritas UK and Veritas Singapore. All of these entities are collectively referred to as Veritas Ireland from now on.

Overall, Veritas Ireland has its own manufacturing facilities and production lines. It also controls all production aspects and is responsible for growing its operations and presence in the EMEA and APJ region.

### ***Agreements***

On November 3, 1999, there are two important agreements that became effective:

- (1) Agreement for Sharing Research and Development Costs (RDA): the parties involved in this agreement are Veritas U.S., Veritas Operating Corporation, NSMG, and Veritas Ireland. In this agreement, parties agreed to pool resources and R&D efforts and share

the costs of such R&D. This is the CSA in focus for the remaining of the discussion.

Veritas Ireland makes a buy-in payment to Veritas U.S. for the preexisting intangibles.

(2) Technology License Agreement (TLA): the parties involved in this agreement are Veritas U.S. and Veritas Ireland. In this agreement, Veritas U.S. allowed Veritas Ireland to use certain intangibles such as copyrights and patents as well as the company's trademarks in EMEA and APJ regions. Veritas Ireland pays Veritas U.S. royalties for this use.

### ***Methods for calculating buy-in payments***

Veritas used the comparable uncontrolled transaction (CUT) method in order to calculate the value of the buy-in payment that Veritas Ireland needed to make to Veritas U.S. and arrived at the value of \$166 million. Veritas later adjusted this figure to \$118 million due to Veritas Ireland's changing forecasts. In order to decide if the buy-in payment was arm's length, Veritas chose comparable agreements between Veritas U.S. and OEMs to determine the starting royalty rate for the buy-in payment.

In contrast, the IRS employed an income method and determined a buy-in payment of \$2.5 billion, later adjusted to \$1.675 billion. The IRS' reasoning was that the transfer of existing intangibles had synergistic values and should therefore be treated in aggregate, yielding a significantly larger buy-in payment. The IRS' employment of the income method included a three-step process: estimating a cash flow of arm's-length royalty payments in each period after November 1999, choosing a discount rate, and finally, converting the cash flow to 1999 present value. This present value is the buy-in payment amount the IRS determined Veritas Ireland needed to make.

The Tax Court decided that there were a few mistakes related to the IRS' choice of inputs. In using the CAPM model to calculate a discount rate, the IRS employed the wrong beta, the wrong equity risk premium, and therefore the wrong discount rate. The industry beta that the IRS used was not indicative of Veritas' relative risk at the time, skewed by large companies such as Microsoft. The market premium was also 3.1% lower than the 1926-1999 historical average by Ibbotson Associates. The IRS also used the wrong useful life for the intangibles, assuming that the preexisting intangibles have a perpetual useful life. In also employing a large growth rate into perpetuity, the IRS further distorted the amount of buy-in payment calculated.

As Veritas Ireland also proved its worth in actively managing the growth process of Veritas' presence in the EMEA and APJ regions, the Court ruled that it was unreasonable for the IRS to equate the intangible transfer process between Veritas U.S. and Veritas Ireland to that of Veritas U.S. simply spinning off an established business and its valuable intangible. The Tax Court then concluded that the CUT method employed by Veritas was the most suitable method for determining the buy-in payment due from Veritas Ireland.

### **Amazon.com Inc. and Subsidiaries v. Commissioner (Tax Years 2005-2006)**

#### **Nature of Conflict**

The main issue of conflict in this case is related to the different methods and assumptions that the IRS and Amazon.com Inc. used in calculating the amount of buy-in payment that Amazon.com Inc's Luxembourg subsidiary has to make.

#### **Case Summary**

##### ***Overview about Amazon.com, Inc and its Luxembourg subsidiary***

Amazon.com, Inc. (ACI) is an online retailer incorporated in 1994 in Washington and reincorporated in 1995 in Delaware. From 2000 the retailer has expanded its product offerings

from books into many other categories, from software to furniture. Some of these products are not sold by Amazon itself but rather by third-party vendors who receive help from Amazon in the form of eCommerce platforms and other services. Before the CSA, Amazon U.S. owned most of the intellectual property required to operate its European businesses.

Due to the different challenges of operating business in Europe, Amazon U.S. established a Europe headquarter in Luxembourg (AEHT). AEHT is the holding entity for all European businesses. After that, Amazon rolled out six different agreements, all collectively referred to as: “Amended and Restated Agreement to Share Costs and Risks of Intangible Development” with a stated effective date of January 1, 2005. I refer to this set of agreements as CSA from now on.

### ***Agreements***

As a part of this agreement, Amazon U.S. granted AEHT the right to use “Amazon Intellectual Property”, or pre-existing intangible assets in Europe. This included website technology needed to conduct business in Europe. Amazon U.S. also granted AEHT the use of customer data and other marketing intangibles in the region, and the total payment that AEHT had to make was \$254.5 million. AEHT has played an important role in expanding Amazon’s market presence in Europe and rolling out new technology that improves operations in this region.

### ***Different methods used in calculating buy-in payment***

Amazon calculated the amount of \$254.5 million using the CUT method. However, the IRS issued a notice of deficiency and used the modified income method instead. Using this method, the IRS determined that the correct amount was \$3.6 billion, later adjusted to \$3.468 billion.

Similar to the Veritas case, the Tax Court decided that the IRS used the wrong estimation of useful life of the intangibles. In using the CAPM model to calculate a discount rate, the IRS

also used weekly observations instead of monthly ones in calculating a beta for Amazon. As a result, the beta became 1.55 instead of 2.00, as calculated by Amazon. This makes the discount rate smaller and increases the amount of buy-in payment calculated.

The IRS also argued that subtracting the foreign subsidiary's projected cost-sharing payments from the buy-in payment would eliminate the possibility of the buy-in payment being partially allocated to intangibles developed after the CSA's effective date. However, the Tax Court disagreed with this argument, primarily because the Court determined that AEHT should be entitled to a larger deduction than just the present value of its projected cost sharing payments due to the growing involvement in the intangible assets' development process in the future (portfolio 890-1<sup>st</sup>). In conclusion, the Tax Court agreed with Amazon's use of the CUT method, with some adjustment, as the best method for calculating the buy-in payment.

### **Synthesis – Commonalities across cases and continuing challenges**

Recall that the two hypotheses were:

H1: The main sources of conflict that arise between taxpayers and the IRS are due to different economic assumptions among the different parties.

H2: The IRS' changes to CSA regulations in 2011 have not addressed the sources of these conflicts in a way that makes it less likely for taxpayers to be challenged by the IRS.

Regarding the first hypothesis, it can be seen that from looking at the cases, there are two primary sources of conflict: matter of the law and financial assumptions. In terms of matter of the law, Altera and Xilinx cases share a similar issue. In both cases, the main conflict issue was whether Altera and Xilinx should include stock-based compensation costs as a part of their CSA cost pool. In terms of financial assumptions, the Veritas and Amazon cases are similar in that the main source of conflict was regarding methods and assumptions in calculating buy-in payments. As a result,

the first hypothesis is only partially correct. In fact, apart from differences in economic assumptions related to the intangibles developed under a CSA, the IRS and taxpayers can also disagree on the matter of the law. This source of conflict was illustrated through the cases of Altera and Xilinx. The three main contested financial issues in these two cases were: useful life of assets, beta, and market premium. A few suggestions for establishing a less ambiguous protocol for these financial assumptions include:

- Useful life of assets: industry and competitive guidelines as well as other information related to the project covered under a CSA should be used in estimating the useful life of the benefits for this agreement.
- Beta: while there are pros and cons to the different ways of estimating beta, it is crucial for involved parties to provide supporting arguments tailored to the specific industry and firm's characteristics when choosing an estimation method. In addition, they could also employ additional statistical considerations such as shrinkage estimation as needed.
- Market Risk Premium: the historical market risk premium chosen should be from a period that closely matches with the period of CSA cash flows. Assumptions of market return and risk-free rate should also be disclosed and justified to minimize the possibility of conflicts between IRS and taxpayers.

Overall, the biggest takeaway for all these suggestions is that involved parties should document and substantiate the reasonings behind their input choice as much as they can to minimize conflicts with the IRS.

To address the second hypothesis, one needs to focus on the specific changes in the 2011 regulations. As discussed in the history section above, there was a focus on introducing more rigor

to the discount rates used when calculating the value of PCT payments. In contrast, there has been no definitive conclusion on the issue of stock-based compensation costs.

The additional guidance in choosing discount rate can be seen as a step in clarifying a common source of conflict between the IRS and taxpayers. More specifically, one source of conflict observed in the Amazon and Veritas case was related to the IRS' economic assumptions and choice of discount rate when readjusting the value of the buy-in payments. From these two observations, the second hypothesis is also partially correct in predicting the IRS' current progress at resolving its conflicts with taxpayers with regard to cost sharing agreements.

## **CONCLUSION**

Two main conclusions are as followed:

1. The two main sources of conflict as observed through the relevant court cases either stem from a matter of the law or differences in economic assumptions.
2. The changes in 2011 CSA regulations have started to address the conflicts stemming from different economic assumptions and especially different choices of discount rates between the IRS and taxpayers.

### **Limitations and future research opportunities**

One of the most significant limitations of the research was due to the sensitive nature of company's transfer pricing information. In general, companies' tax data are proprietary information and not shared with the public. With public companies for example, their financial statements do not disclose the corporate income tax they paid, as well as their deferred tax assets and liabilities as well as tax rate. In addition, information related to these firms' organizational

structure from a tax planning standpoint are difficult to find from public information sources. As a result, a primary study of real examples of tax cases is limited to public court cases.

As I also focused my research on a relatively specific topic within the IRC, namely that of cost sharing agreements within the transfer pricing spectrum, I could not find a significant number of court cases specifically about this topic. As a result, the small number of cases could paint an incomplete picture of potential other sources of conflict between the IRS and MNCs. If I had access to IRS-taxpayer controversies that were settled before advancing to the courts, or if aggregated IRS data were available, I could more closely observe these potential sources of conflict. In the future, I could develop questionnaires targeted towards other transfer pricing professionals and industry players in order to analyze additional sources of conflict before they reach the litigation stage.

## APPENDIX

### Research methodology outline

#### Research Approach

There are three main forms of reasoning: inductive, deductive or abductive

1. Deductive Reasoning: This form of reasoning draws specific and logical conclusions from a general premise (Bradford, 2017). In essence, the main use for this style of reasoning is to apply theories to specific circumstances.
2. Inductive Reasoning: This form of reasoning makes broad generalizations from specific observations (Bradford, 2017).
3. Abductive Reasoning: This form of reasoning starts with an incomplete set of observations and proceeds to the likeliest possible explanation for the group of observations (Bradford, 2017).

The main style of reasoning that this thesis will utilize is inductive reasoning, more specifically:

- One research question for this thesis is to induce a statement regarding common areas of conflict among taxpayers and the IRS. As a result, the thesis' main approach is to examine court cases in the U.S. related to the issue of CSA, and draw logical conclusions based on the similarity and differences among the issues in these cases.
- Another research question is whether the IRS' recent modifications of CSA regulations have addressed the issues of conflicts in the past. From a set of observations collected for the first question, comparisons and conclusions will be made regarding the success of the IRS' action in addressing these conflicts.

## **Research Method**

The two main research methods are quantitative and qualitative:

1. Quantitative research relies on processing numerical data through statistics and mathematics to investigate phenomena (Basias et al., 2018).
2. Qualitative research focuses on analyzing experiences and behaviors among others in analyzing phenomena (Basias et al., 2018).

This thesis will use qualitative research as this type of research better addresses my two research questions in a meaningful and flexible manner.

## **Research Strategy**

There are seven types of research strategies (Shruti, 2016):

1. Experiments
2. Surveys
3. Case studies
4. Ethnography
5. Grounded theory
6. Action research
7. Archival research

Of these seven research strategies, the thesis employs archival research as its main research strategy. This style of research involves surveying records and data that are either recent or historical (Shruti, 2016).

## **Method of Data Collection**

The thesis primarily involves review the IRC and CSA court cases. As a result, the majority of the data collected in this thesis are secondary data, which are data that have been collected and

recorded beforehand. Some of the advantages and disadvantages associated with secondary data include (Crossman, 2018):

### *Advantages*

- Readily available
- Cost and time effective
- Each observation (court case) contains both in-depth and broad information regarding the taxpayer's operations, allowing for effective analysis with sufficient context information.
- The information collected often has a high level of expertise and professionalism when collected from trusted sources.

### *Disadvantages*

- The data is not tailored to thesis specific research questions.
- No control over the quality of the data collection and recording process.

### **Data Source**

The key court cases and tax years examined in this thesis include:

- Altera Corporation and Subsidiaries v. Commissioner – 2004-2007
- Amazon.com Inc. and Subsidiaries v. Commissioner – 2005-2006
- Veritas Software Corp. & Subsidiaries, et al. v. Comm. – 2000-2001
- Xilinx Inc. & Subsidiaries v. Commissioner– 1997-1999

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