

Corporate Profit Shifting and the Multinational Enterprise

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Corporate Profit Shifting and the Multinational Enterprise

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**Copenhagen
Business School**
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Corporate Profit Shifting and the Multinational Enterprise

Stuart Webber

The PhD School of Economics and Management

PhD Series 23.2012

Corporate Profit Shifting and the Multinational Enterprise

By Stuart Webber
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Executive Summary

This dissertation analyzes ways in which Multinational Enterprises (MNEs) shift profits from one country to another to reduce their income tax expense. This is an important topic for a number of reasons. From a country's perspective, its income tax rates and policies can have a significant impact upon its tax revenue, economic competitiveness, and the vibrancy of its economy. From the MNE's perspective, income tax rates and policies determine a firm's tax obligations, and thus affect net income and enterprise value. The dissertation examines several ways in which MNEs shift profits to reduce income taxes, and consists of five chapters.

The introductory chapter reviews the economic evidence demonstrating firms shift profits from one country to another in response to tax rates. In the past two decades a number of economic studies have shown firms use tax and accounting techniques to shift reported profits to low tax jurisdictions, and that chapter reviews key articles that have demonstrated this. The second paper explains how MNEs finance international investments to shift interest income to low-tax jurisdictions. It reviews government tax policies in a number of countries that have been enacted to limit interest income shifting, and recommends an approach to control this activity. The third paper examines tax efficient supply chains, in which tax departments and supply chain organizations collaborate to site business operations to achieve supply chain objectives and reduce tax obligations. The fourth chapter analyzes how some U.S.-headquartered firms have moved their corporate headquarters from the U.S. to tax havens, to reduce their tax expense and avoid U.S. international tax policies. The fifth and final chapter examines new U.S. tax regulations that propose to value intellectual property transfers in the same way outside investors would, which the U.S. Internal Revenue Service (IRS) calls its "investor model." It also makes recommendations concerning how the investor model can be improved.

This dissertation draws upon a number of academic disciplines, including economics, finance, supply chain management, and tax law. It does not fit into a single academic category, and it seeks to make a contribution by drawing upon these various disciplines to recommend ways countries can tax economic activity in fair and effective ways, and suggest ways firms can minimize tax obligations while still complying with international tax laws.

Resumé

Denne afhandling analyserer, hvordan multinationale virksomheder flytter overskud fra et land til et andet for at reducere skat af årets resultat. Dette er et vigtigt emne af en række årsager. Fra et lands perspektiv kan indkomstskatten og skattepolitikken have en betydelig indflydelse på landets skatteindtægter, konkurrenceevne og dynamikken i økonomien. Fra den multinationale virksomheds perspektiv bestemmer indkomst, skattesatser og skattepolitikker en virksomheds skatte-forpligtelser, og påvirker således årets resultat og virksomhedens værdi. Afhandlingen undersøger flere forskellige måder, hvorpå multinationale virksomheder flytter overskud for at nedbringe indkomstskatten, og består af fem kapitler.

Det indledende kapitel gennemgår den økonomiske vidnesbyrd, og viser at virksomheder flytter overskud fra et land til et andet som reaktion på skattesatser. I de sidste to årtier har en række økonomiske undersøgelser vist, virksomheder anvender skatte- og regnskabsmæssige teknikker til at flytte rapporterede overskud til favorable skattejurisdiktioner, og kapitlet gennemgår vigtige artikler, der har påvist dette. Det andet papir beskriver, hvordan multinationale virksomheder finansierer internationale investeringer for at flytte renteindtægter til regioner med lav skat. Papiret gennemgår regeringers skattepolitik i en række lande, der er blevet vedtaget for at begrænse flytning af renteindtægt, og anbefaler en tilgang til at styre denne aktivitet. Det tredje papir undersøger skatte-efficiente forsyningskæder (supply chains), i hvilke skattemyndigheder og supply chain organisationer samarbejder om at indrette forretninger til at opnå supply chain mål og reducere skattemæssige forpligtelser. Det fjerde kapitel analyserer hvordan visse virksomheder, med hovedkvarter i USA, har flyttet deres hovedkvarter fra USA til skattely for at reducere deres skatteomkostning og undgå amerikansk international skattepolitik. Det femte og sidste kapitel undersøger de nye amerikanske skatteregler, der søger at værdisætte overførsel af intellektuel ejendomsret på samme måde som investorer udefra ville gøre. Dette kalder U.S. Internal Revenue Service (IRS) sin "investor-model." IRS udarbejder også anbefalinger om, hvordan investor-modellen kan forbedres.

Denne afhandling trækker på en række akademiske discipliner, herunder økonomi, finansiering, supply chain management og skatteret. Afhandlingen passer ikke ind i ét specifikt akademisk felt, men søger at yde et bidrag ved at trække på disse forskellige discipliner for at anbefale måder, hvorpå lande kan beskatte økonomisk aktivitet på fair og effektive måder, og foreslå, hvordan virksomheder kan minimere skattemæssige forpligtelser i overensstemmelse med internationale skattelove.

Introductory Chapter: Evidence of Corporate Profit Shifting

Introduction

By many measures international trade and Foreign Direct Investment (FDI) have increased dramatically over the past several decades. Driven by the desire to improve their standard of living, many countries have transitioned to market economies and encouraged international trade and overseas investment. Several nominally communist have also welcomed international investment and created export-driven economies. Barriers to trade between nations have fallen as international agreements have reduced tariffs and other trade barriers.

This has created many new business opportunities for Multinational Enterprises (MNEs) and they have responded by increasing international investment. In part this has been driven by the desire to enter new markets and attract new customers. This has also been motivated by objectives to reduce cost structures and take advantage of lower wage rates in less-developed countries.

Many trade barriers, such as duties and tariffs, are negotiated through bilateral and multilateral agreements. In general countries agree to lower such costs as part of a coordinated effort to reduce them simultaneously. However nations do not frequently coordinate their income tax rates and policies. In fact, nations often compete with each other for investment by offering low tax rates and attractive tax policies. As Gresik (2001) notes, MNEs can determine where they want to invest their resources, and thus governments often compete for FDI by reducing taxes (p. 800). While many factors go into a MNE's decision concerning where it should site business activities, income tax rates are one important cost consideration.

Research has demonstrated MNEs are attracted to low income tax rates and move business activities to reduce this expense. Grubert and Mutti (1991) said "taxes can have a powerful effect in explaining the distribution of MNC capital in manufacturing" (p. 285). Clausing (2006) concluded that "Multinational firms are more likely to invest in low-tax countries, and this in turn generates more trade with such countries" (p. 283). In short, MNEs are attracted to low income tax rates and this will impact investment decisions.

Not only do income tax rates impact where investments are made, research has demonstrated MNEs are also able to shift taxable income from one country to another. In other words, not only do MNEs shift real economic activity to countries with low income tax rates, they also employ a variety of tax techniques to shift reported income from high income tax to low-tax countries. These techniques can include adjusting transfer prices, extending intercompany loans from low-tax to high-tax countries, or changing the worldwide headquarters of the MNE. In fact, in many ways it is far easier to use these tax techniques to shift reported income from one country to another than it is to move real economic activity. Shifting reported income to another country might be accomplished quickly by finance and tax departments through tax and accounting procedures that have negligible impact upon business operations. In contrast, opening a new factory abroad can require a substantial investment of time and capital, disrupt a firm's business operations, and displace many employees.

New Challenges in Transfer Pricing

International transfer pricing laws are based upon the “arms-length standard.” This standard says that organizations within the MNE should behave as if they are unrelated parties. Thus transfer prices should be consistent with prices profit-maximizing businesses would charge for their products and services. To achieve this, firms and tax authorities often compare internal transfer prices with trade prices charged by businesses for similar products and services. However a number of developments in recent years have made it more difficult to determine what a product's trade price, and thus its transfer price, should be.

One of these developments is the growth of the modern, international supply chain. Supply chains have become increasingly elaborate and sophisticated in recent years, as MNEs have shifted manufacturing and other business processes to locations where they can be performed most efficiently. Reductions in tariffs and duties have enabled firms to move goods more cheaply between sites, and advanced communications technologies have made it easier to manage an international supply chain. As a result, companies are frequently transferring partially completed, intermediate goods from one country to another. It is often difficult to find a reliable benchmark price for a partially-completed good. Comparable trade prices are more

difficult to locate. In the absence of good comparison prices, MNEs have the opportunity to manipulate transfer prices and reduce their worldwide tax expense.

Second, it can be particularly challenging to benchmark trade prices when the products are sophisticated, high-technology goods. When a final product consists of a variety of hardware components and software programs, it can be very difficult to establish with any precision how much value each piece contributes to the final product's total value. If those components are produced in different countries MNEs can calculate transfer prices to achieve income tax objectives. They can manipulate transfer prices, shift profits to low-tax regions, and lower their worldwide tax rate. These trends have created new challenges and opportunities in international tax, and have motivated several of the papers in this dissertation, which will be briefly described in the next section.

Dissertation Papers

This dissertation includes four additional papers that examine ways in which MNEs shift profits from one country to another, and how tax authorities attempt to limit this activity. The four articles that follow are:

- 1) Thin Capitalization and Interest Deduction Rules: A Worldwide Survey
- 2) The Tax Efficient Supply Chain: Considerations for Multinationals
- 3) Escaping the U.S. Tax System: from Corporate Inversions to Re-domiciling
- 4) The IRS Investor Model

A brief overview of each paper will be provided here, and later in this paper I will discuss each of these papers in more detail, explaining the focus, approach, and contributions of each article.

The Thin Capitalization and Interest Deduction paper examines how MNEs finance their overseas operations to reduce income taxes. In general there are two ways in which firms can finance such investments: they can inject either debt or equity into their subsidiaries. When investments are funded with debt, firms are able to recognize tax-deductible interest expenses. If

the MNE extends loans from a low-tax jurisdiction to a high-tax jurisdiction, interest income and profits are shifted to the low-tax jurisdiction, and the firm lowers its worldwide tax expense. This paper analyzes the rules a number of countries use to limit high levels of debt and tax deductible interest expenses, and proposes an approach countries might use to limit this activity in a fair, efficient and effective way. This paper was also published in 2010 in Tax Notes International.¹

The Tax Efficient Supply Chain paper explains ways in which MNEs can improve net income by linking income tax planning and supply chain planning. I argue that income tax planning and supply chain planning are frequently viewed as unrelated activities. However both supply chain and income tax planning focus upon where firms should site their business operations. Therefore to maximize net income, income tax and supply chain planning should be linked, so they can develop a tax efficient supply chain. As mentioned, many firms have restructured their supply chains in recent years, so the tax impact of supply chain restructuring is very important. This paper was recently published in an edition of Tax Notes International.²

The Corporate Inversions and Re-domiciling paper analyzes another approach U.S.-based MNEs have used to reduce income taxes and avoid complex international tax policies. As mentioned, many MNEs have restructured their supply chains in recent years, moving business operations from one location to another. In recent years some U.S.-based MNEs have taken this activity a step further, and moved the corporate parent itself abroad. That paper examines recent developments and trends in corporate inversions and headquarters relocations and was also published in Tax Notes International.³

The IRS Investor Model paper examines IRS rules which were drafted to value sales of Intellectual Property (IP) from one country to another. Before these regulations were drafted a

¹ Webber, S. (2010). Thin capitalization and interest deduction rules: a worldwide survey. *Tax Notes International*, 60(9). 683-708.

² Webber, S. (2011). The tax efficient supply chain: considerations for multinationals. *Tax Notes International*, 61(2). 149-168.

³ Webber, S. (2011). Escaping the U.S. tax system: from corporate inversions to re-domicling. *Tax Notes International*, 63(4), 273-295.

number of U.S. MNEs transferred intellectual property to overseas entities within the MNE, and the U.S. Internal Revenue Service (IRS) believed firms were under-valuing these sales, and thus reducing their U.S. income taxes. The IRS proposed an "investor model" to value intellectual property sales, purporting to determine intellectual property values in the same way an external investor would. Valuing IP properly is a key issue today, as copyrights, patents, trademarks and intellectual know-how are the most valuable assets many firms possess.

But before explaining my papers in more detail, it may be helpful to demonstrate that corporations do shift profits in response to tax rate differences. The following sections show that MNEs shift reported profits from one country to another in response to income tax rates, and they are able to reduce their total tax obligations by doing this. Several of these papers have also demonstrated the tax tools MNEs use to shift reported profits and lower their worldwide tax obligations.

Evidence of Profit Shifting Behavior

Over the past twenty years a number of studies have demonstrated MNEs shift both real economic activity and reported profits from high-tax jurisdictions to low-tax jurisdictions. For example, Grubert and Mutti (1991) conducted a study of U.S.-headquartered MNEs operating in 33 countries, using firm-level financial information provided to tax authorities in 1982. They concluded that income taxes had a powerful impact upon MNE location decisions; low income tax rates attracted FDI. In addition, U.S. firms imported and exported more with low-tax countries than with high-tax countries. But beyond this, their results were consistent with profit shifting behavior: firms were employing tax strategies to shift income to low-tax regions. Grubert and Mutti said this could be accomplished through manipulating transfer prices or leveraging debt upon subsidiaries in high-tax countries, but the paper did not demonstrate which tools were actually used (p. 286).

Hines and Rice (1994) also analyzed the performance of U.S.-based MNEs, again relying upon firm-level reported profits in a variety of countries. They concluded U.S. firms increased their

investments in tax havens during the early 1980s (p. 153). But on top of the real economic activity shifted to tax havens, their results suggested firms were shifting reported profits to those jurisdictions. They found that reported profit levels in tax havens were “extraordinarily high” (p. 149), consistent with manipulated transfer prices, intercompany interest payments, and other techniques employed to shift earnings from high-tax to low-tax jurisdictions. Devereux and Maffini (2007) prepared a comprehensive survey of firm-level data demonstrating that MNEs shifted both real activity and reported profits to achieve tax minimization goals.

Evidence of Transfer Price Manipulation

While these studies demonstrated firms engaged in profit shifting behavior, they did not demonstrate the mechanism by which firms accomplished this goal. Both manipulating transfer prices and intercompany debt could accomplish this objective. Clausing (2003, 2006) and Bernard, Jensen and Schott (2006) used product price information to show MNEs manipulated transfer prices to achieve tax objectives.

Clausing (2003) directly analyzed trade and transfer prices to demonstrate U.S.-based MNEs priced products to reduce income taxes. She analyzed trade and transfer price information collected by the U.S. Bureau of Labor Statistics for 22,000 items, both imports and exports, between 1997 and 1999. Clausing demonstrated pricing behavior was consistent with tax minimization goals. Transfer prices were below trade prices when products were sold to low-tax countries, which reduced worldwide tax expenses. Transfer prices were above trade prices when products were sold to high-tax countries, which also reduced income taxes. Clausing (2006) used this same database to investigate how tax minimization can impact international trade statistics. She showed that U.S.-based MNEs tend to under-price intercompany sales to low-tax countries and over-price sales to high tax countries, which she called the price effect. She demonstrated that firms will engage in more intercompany activity with related parties in low-tax countries than in high-tax countries, which she termed the quantity effect. And all things being equal, companies will make more investments in low-tax countries than high-tax countries, which Clausing called the location effect.

Bartlesman and Beetsma (2003) also developed a methodology that did not focus upon reported profits. Using OECD's STAN sectoral database they analyzed value added, defined as sales less the cost of intermediate transactions. Intermediate transactions include both goods and services purchased from other entities within the MNE. Value added is less likely to be misreported, since it is not impacted by direct expenses, interest expenses, and expense allocation methodologies. Bartlesman and Beetsma ran a regression of the total ratio of value added to wage payments to differences in corporate tax rates, and demonstrated corporate profit shifting within Europe. They concluded the impact of shifting reported income from one country to another is significant from both a statistical and economic perspective, calculating that perhaps more than 65% of income expected from a tax increase would be lost due to income shifting (p. 2226).

Bernard, Jensen and Schott (2006) used price information from the U.S. Customs Bureau between 1993 and 2000 to analyze the differences between arm's length (trade) prices and related-party transfer prices. Their analysis demonstrated large differences between arm's length, trade prices when compared to related- party, transfer prices. The direction of those differences was consistent with tax minimization strategies. Furthermore, the authors found that this price difference was significantly larger for highly differentiated, complex products than it was for commodities.

Huizinga and Laeven (2008) analyzed EBIT to demonstrate European MNEs shift profit. By focusing on EBIT they eliminated intercompany interest payments as the cause of income shifting. Using the Amadeus database, they used firm-level information on European MNEs in 1999 to show these firms were able to shift substantial income from countries levying high-income taxes to countries with lower income tax rates. They found that firms were shifting income from such countries as Germany, which imposed high income tax rates that year, to countries with lower income tax rates, such as Hungary. Moreover, they determined "profit shifting leads to a significant redistribution of national of national corporate tax revenues in Europe" (p. 1180). Maffini and Mokkas (2011) use this same firm-level data and investigated how income tax differences impact total factor productivity. One of their conclusions was that firms in countries with low income tax rates appear to be more productive than in countries with

high income tax rates, since companies may use transfer pricing policies and expense allocation methodologies to boost income in low tax jurisdictions. Thus their economies look more productive.

Evidence of Earnings Stripping

The evidence also indicates MNEs use intercompany loans to shift income from one country to another. For example, Mintz and Smart (2004) found Canadian businesses shifted profits within Canada in response to local tax rates. Both the Canadian federal government and its provinces levy income taxes, but there are two ways in which firms calculate provincial tax obligations. If the business opens affiliates in various provinces, each is required to prepare a separate income statement and determine the profits earned there. But if the business does not open affiliates in each province, the firm allocates taxable income to each province based on a statutory formula that includes sales and payroll data. Mintz and Smart reasoned that when a firm formed affiliates in differing provinces it would be easier to shift income between them. Their findings were consistent with this hypothesis; they determined that firms using separate accounting procedures were able to shift more income to low tax provinces than did firms allocating profits through the statutory formula. Furthermore, Mintz and Smart said “our results show that interest payments are significantly related to taxes for ‘shifting’ firms, but not for other firms” (p. 1165). In other words, intercompany loans appear to be one of the key techniques firms use to shift profits, though they did not exclude the use of other tax tools to accomplish this goal. They also found that the financial impact was very significant, stating “income shifting has pronounced effects on provincial tax bases” (p. 1149).

Seida and Wempe (2004) also demonstrated that intercompany interest payments were a tool some firms used to reduce their worldwide tax rate. Their study was part of a larger analysis of corporate inversions, which will be also described in the next section. Seida and Wempe analyzed the intercompany interest expense for the four inverted firms that reported this information in their 10-K’s, and concluded intercompany interest payments were used to shift earnings out of the U.S. They write “we conclude that substantial portions of the ETR (Effective Tax Rate) reductions and post-inversion earnings reported by these four firms are the result of stripping U.S. earnings to lower-tax jurisdictions” (p. 822). They determined intercompany debt

and interest payments were the tool used to move earnings from the U.S. to lower tax jurisdictions.

Impact of Corporate Inversions

Desai and Hines (2002) focused on another tactic U.S.-based MNEs used to reduce their income tax obligations: moving their corporate headquarters abroad. In the late 1990s and early 2000s a number of American corporations moved their parent company's headquarters from the United States to Caribbean tax havens, such as the Cayman Islands and Bermuda. In each case these were paper transactions that officially moved the parent company's legal home, but had no material impact on the firm's business operations. Desai and Hines consolidated financial information on twenty-four American firms that announced their intention to invert before 2003. They compared those results with balance sheets and income statements for 663 firms that did not invert over this period. They ran a regression on this data and demonstrated that firms with a high proportion of foreign assets were more likely to invert (p.428). As these firms had substantial international operations, this suggested to them that the U.S. policy of taxing worldwide income may have motivated corporate inversions. They also concluded that firms with high debt ratios were more likely to invert (p. 429). This suggested to them that U.S. interest allocation rules, which use statutory formulas to transfer interest expenses to foreign subsidiaries, also motivated corporate inversions.

As mentioned, Seida and Wempe (2004) also analyzed U.S. corporate inversions. Their study compared the Effective Tax Rate (ETR) of 12 inverted firms with the tax rates of 24 comparable firms. For each inverted firm two control firms were selected; these firms were competitors in that industry with similar annual revenue figures. Seida and Wempe found the inverted firms reduced their ETR by 11.6 percentage points after an inversion, while the tax rate for the control firms declined by four percentage points. Thus corporate inversions led to a significantly larger reduction in their tax rate. They also analyzed changes in overseas and domestic profitability after an inversion. They found that once the inversion was completed the profitability of overseas operations doubled, and the formerly profitable U.S. subsidiaries reported losses (p. 814). As discussed in the prior section, Seida and Wempe analyzed the intercompany interest

payments of four firms, and determined that the intercompany debt leveraged on the U.S. entity, combined with the corporate inversion, caused the substantial reduction in each firm's worldwide tax rate and U.S. tax obligations. The corporate inversion made the earnings stripping more effective, as the firms were able to avoid U.S. tax policies that tax worldwide income. Thus by inverting those companies permanently reduced U.S. income taxes.

To summarize these studies, they demonstrated MNEs have found a variety of tax techniques to shift reported income from one country to another. Grubert and Mutti (1991) and Hines and Rice (1994) showed profit margins were higher in low-tax countries than in high-tax countries. Clausing (2003, 2006) and Bernard, Jensen and Schott (2006) demonstrated that MNEs manipulated transfer prices to reduce their tax expense. Mintz and Smart (2004) and Seida and Wempe (2004) demonstrated that MNEs structured intercompany loans from low-tax to high-tax jurisdictions to shift reported profits and reduce tax expenses. Desai and Hines (2002) and Seida and Wempe showed how U.S. MNEs were able to reduce their worldwide tax expense by moving their corporate headquarters abroad.

With this evidence in mind, the four additional papers in this dissertation will now be discussed in more detail, along with the papers' approaches, conclusions, and contributions to knowledge of corporate profit shifting activities. As mentioned, the papers in this dissertation have focused on four methods firms have used to shift profits from one country to another to achieve tax goals: using financing strategies to shift profits from high-tax to low-tax jurisdictions; integrating tax planning and supply chain planning to create a tax-efficient supply chain; transferring the MNE's corporate home from one country to another; and transferring intellectual property to other countries to reduce income tax obligations.

Dissertation Papers

International tax draws upon several disciplines, including law, accounting, supply chain management, finance, and economics. The papers that follow draw on principles from these various fields, and do not fit into one academic category. In several papers I have attempted to make a contribution by bringing together information from several disciplines. However the papers are connected in that each focuses on international tax management. The papers explore

ways MNEs can use existing rules to reduce their tax expense legally, or suggest ways in which countries can craft rules to achieve objectives to raise tax revenue in fair, efficient and effective ways.

The next paper in this dissertation focuses upon thin capitalization, a financing technique MNEs use to shift profits from high-tax to low-tax jurisdictions. The arm's length standard should be applied to intercompany loans, but in practice applying this principle has been challenging. Tax laws provide an incentive for firms to finance investments with debt rather than equity, since interest payments are often tax deductible, and dividend payments are not. However trade businesses are likely to face market constraints that limit their debt levels. Lenders may be reluctant to extend loans to highly leveraged firms, and investors may avoid the securities of firms with excessive debt. However these market constraints may not limit the debt levels of a subsidiary within a MNE, since the lender and borrower are part of the same worldwide enterprise. As they are part of the same MNE, the lender may not be concerned with the borrower's potential default risk. Thus market forces may not limit intercompany debt or tax-motivated earnings stripping.

As mentioned, Mintz and Smart (2004) and Seida and Wempe (2004) demonstrated companies extend intercompany loans to shift earnings from high-tax to low-tax locations. The Thin Capitalization and Interest Deduction paper evaluates the approaches a number of the world's most developed economies have used to control this activity. In general countries have attempted to control earnings stripping by establishing "one size fit all" quantitative limits on either debt-to-equity ratios and/or on interest expense deductions, though some countries employ a combination of approaches to limit intercompany debt and earnings stripping.

The Thin Capitalization and Interest Deduction paper argues that one size fits all limitations are frequently ineffective at controlling thin capitalization. If a country establishes a debt-to-equity limit at a relatively high level, many firms are able to extend loans and shift earnings from one country to another for the sole purpose of reducing income taxes. For example, suppose a MNE chooses a business model that maintains low debt levels to minimize its risk and keep interest expenses low. This same firm might choose to finance its subsidiaries with far higher levels of

debt than the worldwide business would accept, for the sole purpose of reducing taxes. At the same time, these one size fits all limitations might constrain MNEs that have decided upon a leveraged capital structure. The Thin Capitalization and Interest Deduction paper argues the most effective and fair way to limit earnings stripping is to use the worldwide enterprise's ratio of interest expenses to EBITDA to limit each subsidiary's tax deductible interest expense. In other words, if the worldwide enterprise's ratio of trade interest expense to EBITDA is 15%, that figure should be each subsidiary's tax deductible interest expense limit. This approach can prevent firms from incurring tax motivated intercompany debt, and it would also treat firms or industries that choose leveraged financial structures more fairly. Furthermore, the limit is determined by the parent firm's capital structure, a logical limitation based on the worldwide enterprise's funding strategy.

The Tax Efficient Supply Chain paper focuses upon the relationship between international income tax and supply chain planning. As mentioned, supply chains have become increasingly sophisticated in recent years, and many companies have become adept at rapidly shifting activities from one country to another, to sites in which they can be performed most efficiently. From a legal perspective, transfer pricing laws are based on the assumption that the subsidiaries within the MNE are formed to perform clearly defined functions, such as invent products, manufacture them, distribute goods, or sell products and services. This functional model supports transfer pricing, as firms and tax authorities can benchmark profit levels of similar businesses to determine the appropriate profit margins for the MNE's subsidiaries. Supply chain restructurings frequently change the functions performed within the MNE and its subsidiaries, so tax departments also need to determine whether these supply chain changes impact their functional model of the MNE.

The supply chain paper shows that the preponderance of supply chain literature has focused upon maximizing pre-tax income. I argue firms should increase shareholder wealth by maximizing net income, and to accomplish this they need to link supply chain and income tax planning. Both activities determine where firms should site business operations, so they should collaborate to accomplish this. Moreover, the evidence indicates some firms are linking tax and supply chain

planning to create a tax efficient supply chain. However supply chain organizations and tax departments often have different reporting relationships and expertise, so these activities may not be naturally linked for many businesses. Therefore MNEs need to find ways to encourage collaboration between supply chain and tax organizations.

The Tax Efficient Supply Chain paper specifically focuses upon income tax considerations firms should consider when they construct a tax efficient supply chain. In particular, it analyzes the functional model of MNEs to determine the best opportunities for integrated supply chain and tax planning. The paper evaluates a MNE's functional entities such as sales companies, distribution centers, manufacturing organizations, procurement organizations and shared service providers, and identifies key factors firms should consider when constructing an income tax efficient supply chain. In addition, the paper also identifies ways in which tax organizations can support their firm when tax authorities audit supply chain restructurings.

The next paper in this dissertation analyzes corporate inversions and headquarters relocations. As mentioned, in a corporate inversion a firm engages in a series of legal transactions to move its legal headquarters from one country to another. In general these were paper transactions that had no impact upon how the firm was actually managed. From a legal perspective, there are two competing views concerning how a firm's headquarters should be determined. Most European countries use "real seat" rules to determine where a company is headquartered, focusing upon the location where key management decisions are made. However the United States uses "place of incorporation" rules, which identify the MNE's parent country by determining where the parent company is legally incorporated. Place of incorporation rules made it comparatively easy for U.S. MNEs to move their headquarters by reincorporating the corporate parent abroad, since the parent company could move its legal home through paper transactions that required no change in where the firm was actually managed.

A number of U.S.-headquartered firms relocated the parent company in the late 1990s and early 2000s, but the U.S. Congress enacted tax laws to limit this activity in 2003. While some analysts

said corporate inversion activity apparently was reduced since that law was enacted, my paper actually quantified the change. The paper demonstrated that while six S&P 500 members inverted in the five years prior to 2003, no S&P 500 members have inverted since then. It also showed that of the six firms that inverted prior to 2003, all but one has relocated again, moving from Caribbean tax havens to either Ireland or Switzerland.

The Corporate Inversions and Re-domiciling paper also evaluated recent developments in corporate inversion laws, and showed why the motivations to escape U.S. income tax rates and policies still exist. These motivations include high tax rates and complicated, worldwide taxation policies. The corporate inversions paper focuses upon the actions of one firm, Ensco, which recently moved its corporate home from the United States to the United Kingdom. Ensco says it “re-domiciled” its headquarters, rather than inverting. Ensco moved key executive managers to the United Kingdom to accomplish this objective. That paper explains a number of key differences between corporate inversions and corporate re-domiciling. It also identifies a number of alternatives firms might consider to avoid high U.S. income tax rates and complicated international tax laws.

The IRS Investor Model paper evaluates recent U.S. Treasury Regulations governing Cost Sharing Agreements (CSAs) in the United States. In a CSA, a number of entities within a MNE agree to share the costs of developing intellectual property, and thus the benefits. The IRS Investor Model and those regulations were written in an attempt to determine more accurate values for sales of intellectual property from one country to another as part of a CSA, generally from the United States to another nation. The investor model purports to value those sales in the same manner a third-party investor would. The primary goal of that paper was to determine whether those Treasury Regulations achieved that objective. This is a critical issue, as many high-technology products have become increasingly sophisticated, and intellectual property may be the most important asset for many firms. Furthermore, as Bernard, Jensen and Schott (2006) note, the differences between trade and transfer prices are relatively large for differentiated, complex products, but narrower for commodities.

As mentioned, transfer pricing laws are generally based upon the arm's length standard. When the arm's length standard was first adopted it may have been easier to enforce than it is currently. If products are commodities or finished goods it is easier to find benchmark transfer prices than it is today, when so many products are either sophisticated, high-technology products or partially-completed, intermediate goods. In short, the arm's length standard needs more clarity and precision than it required in the past, particularly with respect to intellectual property. Finding a reliable benchmark price for intellectual property is inherently challenging, since intellectual property is generally unique. The IRS investor model is an attempt to determine values for intangible products, such as patents, trademarks, copyrights and intellectual know-how.

The IRS Investor Model paper evaluates 2009 Temporary Regulations the IRS released to support its investor model. The regulations replaced the Proposed Regulations the IRS released in 2005 which first articulated this model. My paper identifies a number of ways the new regulations have improved upon the prior regulations. For example, they value intangible assets in more reasonable ways, and recognize the value of such assets may decline over time. However I also argue the IRS should improve its regulations by providing more guidance concerning how taxpayers should determine a discount rate to value profits earned in the future. Because the IRS provides such little guidance on this important topic, I believe taxpayers have little incentive to create Cost Sharing Agreements that comply with the IRS investor model regulations. Instead, I suggest taxpayers may want to consider other approaches to address these issues, such as negotiating an Advanced Pricing Agreement with the IRS.

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Thin Capitalization and Interest Deduction Regulations: A Worldwide Survey

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Abstract

The United States federal government is projecting to incur large budget deficits for many years into the future, and may propose international tax law changes to raise tax revenue. While a 2009 Obama administration proposal to change U.S. international tax laws was withdrawn, a comprehensive overhaul plan may be submitted in the future. One potential change may involve restrictions on interest deductions. The purpose of this paper is to analyze current thin capitalization regulations in a number of key countries, and to recommend the best approach to limit highly leveraged financing structures. These regulations are evaluated by a number of tax principles, including efficiency, effectiveness and fairness. A key problem with many existing approaches is that they enact uniform, “one size fits all,” interest deduction regulations, and these approaches frequently do not achieve their intended objectives. Uniform regulations permit many firms to incur more intercompany debt than the enterprise would choose to borrow, and they can also unfairly constrain other businesses that rely on debt. This paper proposes limiting a Controlled Foreign Corporation’s (CFC’s) tax deductible interest expenses by the worldwide enterprise’s own ratio of interest expense to earnings. This approach may resolve many of the problems inherent in other regulations and it achieves many of the principles for a high quality tax system. This approach should be considered by countries considering amending their regulations, including the United States.

Introduction

The United States federal government is currently facing budget deficits that are among the largest in its history. According to the government's Congressional Budget Office (CBO), the 2009 deficit will total \$1.6 trillion, which is 11.2 percent of GDP, the highest percentage since World War II (CBO Summary, 2009, p. 1). Moreover, budget deficits are expected to remain large long into the future. According to CBO projections, the U.S. federal government's spending will exceed revenue every year over the next decade. The CBO projects rising health care costs and an aging population will put further pressure on budget deficits, and this debt will reduce economic growth. It says that "Over the long term (beyond the 10-year baseline projection period), the budget remains on an unsustainable path" (p. 4). The CBO Summary also states, "Putting the nation on a sustainable fiscal course will require some combination of lower spending and higher revenues than the amounts now projected" (p. 1).

Several years ago the Obama Administration proposed a new set of international tax laws, designed to overhaul the way in which U.S.-based Multinational Enterprises (MNEs) are taxed, and to generate additional tax revenue. While the 2009 proposal was withdrawn, the Obama administration is reportedly proposing a comprehensive overhaul of international tax laws in the future.⁴ One 2009 proposal would have tightened restrictions on interest deductibility, but it would only apply in very limited situations. In contrast, a number of other countries have recently enacted more comprehensive changes to rules governing interest deductions. For example, Germany and Italy have recently overhauled their interest deduction rules, and other EU countries are also considering modifications. As Nadal (2008) writes, "countries around the world, concerned with earnings stripping, have been tightening their thin capitalization regimes" (p. 1). She added: "The question becomes whether the U.S. thin cap rules are tight enough, or whether there are loopholes that can be closed."

⁴ See "Business Fends Off Tax Hit: Obama Administration Shelves Plan to Change How U.S. Treats Overseas Profits" in the October 13, 2009 Wall Street Journal, page A1, for a discussion of its decision to withdraw its 2009 tax proposals. According to the article "Obama aides say the administration has set the idea aside for now, but may return to it as part of a broader tax overhaul sometime next year" (page A1).

This paper's purpose is to analyze international tax laws that regulate excessively leveraged financing structures. These tax laws are designed to combat thinly capitalized financing structures and are important both to governments and MNEs. From a government's perspective, they impact both tax revenue and the country's economic competitiveness. From the MNE's perspective, they determine the firm's tax expense and may shape where it conducts business. The purpose of this paper is to analyze approaches countries are employing to combat these tax minimization strategies and to recommend a strategy that is most likely to achieve the intended objectives.

Thin capitalization is a financing strategy MNEs use to make Foreign Direct Investment (FDI). When a MNE initiates business activities in another country, it frequently forms a local subsidiary to conduct business. These investments need to be funded to support business expansion. The cash is supplied as equity and/or debt. Debt creates an opportunity to lower income taxes, as interest expenses are tax deductible, while dividends are not. When an investment in a high-tax country is funded with intercompany debt extended from a low-tax country, profit is shifted to the country imposing lower taxes. Thus the MNE reduces its worldwide tax rate without incurring additional trade expenses. This can motivate MNEs to fund overseas investments in high-tax jurisdictions with a high ratio of debt-to-equity.

Farrar and Mawani (2008) write: "A business is said to be thinly capitalized if it is financed with a high proportion of debt relative to equity. The rules that limit the amount of interest deductions in those situations are known as thin capitalization rules" (p. 3). Some analysts prefer to focus on how income is shifted from one jurisdiction to another, and use the terms "interest stripping" or "earnings stripping." In describing how income is shifted out of the U.S. Isenbergh (2005) writes: "This maneuver is known in the tax lexicon as 'interest stripping' or 'earnings-stripping' because taxable income is stripped from the U.S. tax environment by interest deductions" (p. 33). Whatever term is used, the evidence demonstrates this is not a theoretical concern; it happens in practice. Haufler and Runkel (2008) write "Recent empirical research provide conclusive evidence that international tax differentials affect multinationals' financing structures in a way

that is consistent with overall tax minimization” (p. 1). Countries imposing high income tax rates are concerned with these funding strategies, contending the income was earned in their country, and profits should be taxed there. To limit this activity, countries have enacted a number of regulatory strategies. Thin capitalization rules limit a firm’s debt-to-equity ratio to control highly leveraged financing structures. Interest deduction regulations directly limit the tax deductible interest expense a firm can recognize. Some countries employ either thin capitalization rules or interest deduction limitations, but many countries use a combination of regulations to combat excessive financial leverage.

Banks, insurance companies, and investment banks rely on significantly more debt than non-financial services firms, such as manufacturing organizations and retail firms. Thus financial services firms have higher debt-to-equity ratios compared to other industries, and some countries establish separate thin capitalization policies for these firms. This paper will not address thin capitalization/interest deduction limitations in that business sector. It will also focus on rules applying to corporate entities, rather than partnerships and other business forms.

The purpose of this paper is to evaluate a number of current approaches used to control excessively leveraged financing structures. These approaches are measured against criteria used to evaluate tax law quality, and a proposal is made concerning the best regulatory approach. This paper assumes no major changes to the existing paradigm of international business taxation; it is taken for granted that each country separately taxes the profits earned by businesses operating within its borders, and that governments do not coordinate their activities when enacting and enforcing tax laws.⁵

⁵ A number of articles have proposed fundamental changes to the existing paradigm of international taxation. For example, see Avi-Yonah, R. and Clausing, K., "Reforming Corporate Taxation in a Global Economy: A Proposal to Adopt Formulary Apportionment." The article is in *Path to Prosperity: Hamilton Project Ideas on Income Security, Education, and Taxes*, edited by J. Furman and J. E. Bordoff, 319-44. Washington, D.C.: Brookings Institution Press, 2008.

This paper contributes to knowledge of these international tax regulations by critically evaluating approaches to combat thin capitalization/interest deduction tax rules. Key findings are that there are flaws in many thin capitalization and interest deduction tax laws that can make them ineffective and inefficient at achieving their intended objectives. Other regulations do not give firms or regulators sufficient guidance to determine whether they are complying with these tax laws. After reviewing tax principles and existing regulations, this paper proposes an approach that satisfies the principles which define an effective, efficient and fair tax law.

Literature Review

As explained, this paper's purpose is to evaluate regulations that constrain highly leveraged financing structures by comparing such regulations against tax principles that define effective, efficient and fair tax laws. Thus this paper draw upon literature from a number of sources, including theories concerning what defines a high quality tax law, and other papers that specifically address thin capitalization issues.

Adam Smith may have been the first economist to define the qualities of fair and effective tax laws, but he wrote at when government spending and taxes were significantly lower than they are today. Musgrave and Musgrave (1976) defined tax principles in a modern era, when government spending programs play a substantial role in developed economies, more activities are taxed, and taxes play an important role in shaping a nation's economy. In addition, MNEs now operate throughout the world and are capable of rapidly moving operations from one country to another, sometimes motivated by the search for lower taxes. The OECD (2001) has also attempted to define tax principles in a world in which global businesses move activities between countries and nations compete vigorously to attract jobs and investment.

Gresik (2001) analyzed a world in which global tax competition shapes national tax laws. He described how MNEs seek to reduce their tax obligations by shifting activities from one country to another, and how tax competition drives countries to reduce income tax rates and attract

Foreign Direct Investment (FDI). As FDI directly and indirectly stimulates economic prosperity and creates a more skilled workforce, nations compete to attract MNEs, eroding the tax base of other countries. Thus tax competition continually drives business tax rates down.

In recent years a number of studies have shown that thin capitalization is one way MNEs reduce their worldwide tax obligations. Desai, Foley and Hines (2004) conducted a study of U.S.-based MNEs, and demonstrated they leveraged subsidiaries in countries with high income tax rates with more debt than subsidiaries in countries imposing low income taxes. In addition, they demonstrated that intercompany debt was more responsive to high tax rates than third-party debt. In other words, the subsidiaries were leveraged with loans extended from related parties, supporting the premise that companies were stripping earnings from high-tax to low-tax jurisdictions. Mintz and Weichenrieder (2005) conducted a similar study of German-based MNEs, and reached very similar conclusions. Subsidiaries of German firms were incurring more debt when they operated in high-tax jurisdictions than they did when conducting business in low-tax countries. They also determined the German subsidiaries were primarily leveraged with intercompany debt, again supporting the hypothesis that firms used thin capitalization strategies to shift earnings from high-tax to low-tax jurisdictions.

Seida and Wempe (2004) conducted a study of U.S. Inverted Corporations (ICs). In a U.S. corporate inversion, MNEs shift their worldwide headquarters from the United States to other countries. They demonstrated several companies that transferred their headquarters abroad reduced their taxes substantially as a result. They showed that several of these companies achieved this result by leveraging their U.S. subsidiary with intercompany debt, stripping earnings from the United States to other countries. Though their study focused only on ICs, their study provided further evidence that MNEs transfer earnings from high-tax to low-tax jurisdictions through intercompany loans and interest payments.

A number of papers have focused upon the specific thin capitalization/interest deduction regulations in certain countries. Lund, Korsgaard and Albertsen (2008) introduced a series of articles describing thin capitalization and interest deduction rules in thirty-five countries. Each

of the articles was written by a specialist in that country's rules. The articles described how interest expenses are treated for tax purposes in each country, and explained restrictions the governments impose on either financing structures or interest deductibility. The authors noted that historically the rules have regulated debt-to-equity ratios. However in recent years some governments have restricted interest deductibility by establishing limits on the ratio of interest expenses to earnings.

von Brocke and Perez (2009) focused upon the evolution of thin capitalization rules in Germany and discussed related developments in the United Kingdom. They described how thin capitalization rules originated in those countries to combat excessively leveraged financing structures, which deprived governments of needed tax revenue. However both countries modified their rules to comply with Article 43 of the EC Treaty, the freedom of establishment clause. Lawmakers in both countries modified their rules to ensure they treated domestic and international firms equitably. In addition, von Brocke and Perez explained how Italian legislators in 2008 modeled new rules after German legislation. The article demonstrated that tax laws sometimes face legal challenges, and it also showed that nations closely monitor thin capitalization laws in other countries.

van Saparoea (2009) also analyzed thin capitalization rules in Germany and the United Kingdom, and offered suggestions concerning proposed changes in the Netherlands. The article described how competitive economic pressures have forced frequent changes to these laws. It also explained the difficulties large countries experience trying to remain economically competitive while other countries reduce tax rates to attract FDI. It provided further evidence tax competition is a key force shaping thin capitalization rules, and demonstrated that tax authorities evaluate thin capitalization rules in other countries when constructing their own laws.

Tax Principles

To evaluate the effectiveness of thin capitalization and interest deduction rules, it will be useful to identify the criteria by which these laws should be judged. It may be impossible to develop a comprehensive list of tax principles to which all would agree. Nonetheless, economists and tax experts have identified general principles by which tax laws should be evaluated. As Musgrave and Musgrave (1976) write, “ideas as to what constitutes a ‘good’ tax system have had their influence. Economists and social philosophers, from Adam Smith on, have propounded what such requirements should be” (p. 210). For the purposes of this paper, we will focus upon those principles that may be relevant to an analysis of thin capitalization and interest deduction tax regulations.

It is generally agreed that tax obligations should be clearly stated, and identified with as little ambiguity as possible. Both the taxpayer and tax collector benefit from knowing precisely the amount owed, and when funds are due. Businesses need this information to prepare accurate financial statements and to prepare financial forecasts. And government agencies need this same information to prepare their financial plans. The European Commission (EC) states that certainty is an important tax principle, emphasizing both the taxpayer’s and government’s need for predictability. The EC (2004) has written “Certainty is desirable to assist business planning, but also to provide a degree of revenue certainty for administration; for example, if the rules governing loss-offset are unclear then neither business nor government can predict tax payments and revenue” (p. 4). For the purposes of this paper, this will be called the certainty principle.

Efficiency is another important principle that is generally supported. To be efficient, a tax system should collect revenue with as little expense as possible. Funds spent collecting taxes reduce the earnings of businesses and individuals, and add nothing to public welfare. Musgrave and Musgrave (1976) write: “Administration and compliance cost should be as low as possible compatible with other objectives” (p. 211). The EC Commission also supports the efficiency principle, writing, “The simpler a tax base is the lower the administrative or compliance costs

should be, for both administrations and business” (p. 5). Furthermore, “The rules of a tax base must be easy to enforce as an unenforceable tax is unlikely to be equitable or neutral” (p. 5).

The EC comments identify another efficiency characteristic, which is the efficient functioning of markets. Most economists believe that when markets are operating efficiently, tax motivations should play a minimal role in shaping business and consumer decisions. Taxes can distort markets and impose a welfare loss upon an economy. Musgrave and Musgrave (1976) wrote “Taxes should be chosen so as to minimize interference with economic decisions in otherwise efficient markets” (p. 210). Ideally taxes should play a negligible role in shaping economic decisions.

However taxes can play an important role in correcting market inefficiencies, or in addressing externalities. As Musgrave and Musgrave (1976) wrote: “At the same time, taxes may be used to correct inefficiencies in the private sector, provided they are a suitable instrument for doing so” (p. 210). Similarly, the EC Commission (2004) has written: “taxation policy may be used to correct ‘market failures’ whereby distortions or inefficiencies in a particular market economy can be ‘corrected’ by the use of specific tax incentives” (p. 4). While it may not be easy to discern whether markets are operating efficiently or not, most economists and tax experts would agree that taxes should play a role in addressing externalities.

Probably all parties agree taxes should be “fair,” but defining fairness with any specificity is difficult. Jones (2006) writes a “standard by which to evaluate a tax is whether the tax is fair to the people who must pay it. While no economist, social scientist, or politician would ever argue against fairness as a norm, there is precious little agreement as to the exact nature of tax equity” (p. 34). Nonetheless, taxpayers and regulators expect tax laws should be rational and logical, and they should not be random or arbitrary. In a general sense, most economists, tax experts and taxpayers expect tax laws should be reasonable, coherent and just. Moreover, they should not unduly impact business operations without good cause.

Some experts have taken the general concept of fairness, and tried to describe it more precisely. Two further fairness definitions have been suggested, and while neither is a comprehensive definition, both identify what many taxpayers expect. One is the benefit principle, which argues a taxpayer's obligations should be related to the value of services received from the government. A second is the ability-to-pay principle, which says taxes should be related to the taxpayer's capacity to meet the obligation. At a minimum, it makes no sense to assess taxes which cannot be paid.

However the benefit principle and the ability-to-pay principle may direct tax laws in different directions. First, it may be difficult to measure and value the government benefits taxpayers receive. How does one value the benefit of police protection or public parks? As Schön (2009) writes, "There is simply no conceivable way to measure the 'price' of public services for the individual private actor" (p. 76). Beyond this, many public services are specifically designed to aid a society's neediest citizens, with the least ability-to-pay. The benefits they receive may far exceed the taxes they can pay. And others may have the capacity to pay substantial taxes, but have little or no need for many government programs. Liberals and conservatives are likely to have different perspectives on which principle best represents fairness. Political conservatives may favor the benefit principle, which advocates paying only for what is received. Political liberals are likely to favor the ability-to-pay principle, which may support income redistribution. As Musgrave (1986) writes, "Contrasted with the conservative appeal of the benefit doctrine, the ability to pay approach was favoured by liberal writers who were not averse to income redistribution" (p. 321).

Musgrave and Musgrave (1976) describe the benefit principle this way: "One approach rests on the so-called benefit principle. According to the theory, dating back to Adam Smith and earlier writers, an equitable tax system is one under which each taxpayer contributes in line with the benefits which he receives from public services" (p. 211). In international tax, this is also used to support taxing profits where they are sourced. Schön (2009) writes, "The benefit principle is meant to justify income taxation with respect to the support granted by a country to the

generation of income in its territory. This principle is in particular invoked by source countries to legitimate taxation in jurisdictions where the taxpayer is not resident but carries on all or part of his income-generating operations” (p. 75). Governments may cite the benefit principle to support thin capitalization/interest deduction regulations, arguing that intercompany loans are extended to shift income from where it is earned, and where government services are provided, to low-tax jurisdictions that provide minimal government support.

Musgrave and Musgrave (1976) describe the other fairness principle this way: “The other strand, also of distinguished ancestry, rests on the ‘ability-to-pay’ principle. Under this approach, the tax problem is viewed by itself, independent of expenditure determination.” (p. 211). Thus tax obligations are not necessarily linked to benefits received. Schön (2009) notes that the ability-to-pay principle rests upon liberal values of shared sacrifice, writing “The ability-to-pay principle is deeply rooted in the Western tradition of being a citizen’s contribution to the common good by reason of solidarity among the members of a society. It is meant to address the different consumption power of different taxpayers in order to enforce a politically defined financial sacrifice” (p. 71). Musgrave and Musgrave say that while market-oriented economists may take issue with the ability-to-pay principle, it remains an important standard by which taxes are frequently evaluated. They write that a “given total revenue is needed and each taxpayer is asked to contribute in line with his ability to pay. This approach leaves the expenditure side of the public sector dangling, and is thus less satisfactory from the economist’s point of view. Yet, actual tax policy is largely determined independently of the expenditure side and an equity rule is needed to provide guidance. The ability-to-pay principle is widely accepted as this guide” (p. 211-212).

Most experts believe taxes should be neutral, in that they should not discriminate in favor or against certain taxpayers and investors, in the absence of externalities. Musgrave and Musgrave (1976) said “Taxes should be chosen so as to minimize interference with economic decisions in otherwise efficient markets” (p. 210). Doernberg (2008) writes “From an efficiency point of view, the aspirational goal for a tax system in general, or for the U.S. rules governing international transactions specifically, is the implementation of a tax-neutral set of rules that neither discourage nor encourage particular activity. The tax system should remain in the

background, and business, investment, and consumption decisions should be made for non-tax reasons” (p. 3-4).

In general, there are two different aspects to neutrality. One is capital-export neutrality, and the second is capital-import neutrality. Concerning the former, Doernberg (2008) writes: “A tax system meets the standard of capital-export neutrality if a taxpayer’s choice between investing capital at home or abroad is not affected by taxation” (p. 4). Schön (2009) describes it similarly, writing that capital export neutrality “requires that—from the position of the investor—the tax burden for foreign and domestic investment is equal and therefore does not distort the decision of whether to invest here or there” (p. 79). While many believe this is still a worthwhile objective, in practice capital-export neutrality does not exist today, due to international tax competition and laws that encourage countries to tax income where it is sourced, or earned. Schön (2009) argues that capital-export neutrality would be “most easily achieved when the country of residence of the investor taxes his or her worldwide income while the country of source fully waives its jurisdiction over income connected with its territory” (p. 79). However source-based taxation is more frequent than residence-based taxation, and few countries would be willing to forgo taxing profits earned (or sourced) in their country.

Capital import neutrality has played an important role in the development of thin capitalization laws. Schön (2009) writes “The concept of capital import neutrality starts from the perspective of the host country of an investment and compares the tax burden for domestic and foreign investors” (p. 80). Doernberg (2008) says “This standard is satisfied when all firms doing business in a market are taxed at the same rate” (p. 5). To encourage FDI and support international trade, many international agreements require that domestic firms and overseas investments are taxed equitably, and countries violating these rules can be subject to trade sanctions and penalties. To attract or limit FDI countries may be tempted to use the tax system to either subsidize or penalize overseas investors, which is considered an unfair trade practice. Thus many trade agreements and international tax standards mandate consistent tax rates and regulations, so companies compete on a “level-playing field.” Some jurisdictions support this

standard with a “freedom of establishment” clause. As will be explained subsequently, several thin capitalization rules have violated this standard, as judged by the European Commonwealth’s (EC) freedom of establishment clause.

Finally, we should ask whether thin capitalization/earnings stripping rules achieve their intended objective. Are they effective? As Musgrave and Musgrave (1976) wrote, it is appropriate to use taxes to correct market inefficiencies (p. 210). In this case, the inefficiency tax authorities wish to address is the shifting of earnings from high-tax jurisdictions in which they are earned, to low-tax jurisdictions. Is a thin capitalization rule effective at achieving this objective? Or is it so lax that it does not restrict abuse? How easy is it to evade the tax laws and move profits? Is the law so restrictive that it constrains firms from financing FDI in ways inconsistent with their business models? In short, do the laws achieve the goals of funding government services while promoting a prosperous economy? An effective thin capitalization law should constrain firms from incurring excessive intercompany debt solely for the purpose of reducing taxes. But it should also allow firms to incur debt, and take a tax deduction, when such debt is a normal part of a firm’s business model.

To summarize, the tax principles used to evaluate thin capitalization, interest expense deduction limits, and related rules are:

- 1) The certainty principle
- 2) The efficiency principle
- 3) The fairness principle, which also includes:
 - a. The benefit principle
 - b. The ability-to-pay principle
- 4) The neutrality principle, which also includes:
 - a. Capital-export neutrality
 - b. Capital-import neutrality
- 5) The effectiveness principle

International Tax Laws

International laws govern how business transactions are treated for income tax purposes, and frequently reflect the tax principles cited. These tax laws are more specific than tax principles, and may be interpreted differently from country-to-country. Nonetheless, they govern how nations tax MNEs. In addition, unlike the tax principles mentioned above, these international tax laws may be the source of litigation between taxpayers and tax authorities in various nations.

Most economists and tax experts believe business transactions should not be motivated solely by tax reduction goals. This is the business purpose doctrine. This doctrine says a business transaction should have some purpose other than tax minimization. Jones (2006) says in the United States “a transaction should not be effective for tax purposes unless it has a genuine business purpose other than tax avoidance. The lack of any business purpose by the participants can render a transaction meaningless, at least from the perspective of the IRS, even if the transaction literally complies with the law” (p. 85)⁶ Many other countries have similar regulations, to prevent taxpayers and advisors from structuring elaborate tax transactions that serve no business purpose other than reducing tax obligations.

Related to the business purpose doctrine, most tax authorities believe tax obligations should be determined by the underlying business substance, rather than the legal structuring of a transaction. This is known as the substance over form doctrine.⁷ In many situations it is possible to structure a business transaction so it literally complies with the law, but the net result of the transaction conflicts with the law’s intention. As Lessambo (2009) writes, “The substance over form doctrine relies upon the underpinning that the tax results of an arrangement are better determined based on the underlying substance rather than its mere formal structuring. Therefore, the IRS has the ability to challenge a given transaction according to its underlying substance” (p. 207). This doctrine is frequently relevant in thin capitalization regulations. For example, to shift income from one country to another, a MNE may extend an intercompany loan from one legal entity to another. Tax regulations might try to prevent this by specifically limiting intercompany

⁶ The business purpose doctrine was first articulated in the United States in *Gregory v. Helvering*, 293 U.S. 465 (1935).

⁷ Within the United States, this doctrine was articulated in *Commissioner v. Danielson*, 378 F.2d 771 (CA-3, 1967).

debt. In response, the MNE might structure a loan so it is literally extended from a third party, but in substance the parent guarantees the debt or initiates a back-to-back loan that culminates in the third-party loan. Tax authorities may argue that while the loan was formally extended from a third party, in substance it was an intercompany loan.⁸ Courts frequently look through the legal agreements and focus on the net business substance of transactions.

Another important legal concept is the arm's-length standard. The arm's-length standard governs how related entities value sales of products and services. When a MNE operates in more than one country, it typically creates a new legal entity to facilitate legal operations in that jurisdiction. That entity may need to buy or sell products from other legal entities within the same MNE. According to Jones (2006), "An important presumption about market transactions is that the parties are negotiating at arm's-length. In other words, each party is dealing in its own economic self-interest, trying to obtain the most advantageous terms possible from the other party" (p. 62). The OECD's *Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations* (2010) cite the arm's-length standard (pp. 31-32). U.S. Treasury Regulation §1.482(1)(b)(1) also supports the arm's length standard, stating, "In determining the true taxable income of a controlled taxpayer, the standard to be applied in every case is that of a taxpayer dealing at arm's length with an uncontrolled taxpayer."

Development and Overview of Thin Capitalization Rules

To understand thin capitalization rules, a brief overview of this issue follows, and a more detailed examination of the regulations in a number of key countries will ensue. Rules in all G-7 countries plus Denmark, the Netherlands and New Zealand will be reviewed in some detail, as rules in those countries illustrate many of the challenges and complexities of drafting effective

⁸ A closely-related and overlapping tax standard is the "step transaction" doctrine. Lessambo (2009) writes, "Under the step transaction doctrine a series of formally separate transactions will be integrated if they show to be interdependent, and part of a sole picture" (p. 209). For example, if a MNE lent money to a bank, and that bank lent the funds back to the MNE's subsidiary, tax authorities might collapse the two transactions together to demonstrate the loan should be viewed as related-party debt. Thus both the form over substance principle and the step-transaction doctrine could be used to treat the series of transactions as a related-party loan.

thin capitalization/interest deduction rules. These rules will be contrasted with regulations in a number of smaller European countries.

In 1969 the United States enacted IRC 385, which gave tax authorities the power to determine if intercompany loans were, in substance, equity investments. Tax authorities believed then that characterizing intercompany loans as equity would resolve the thin capitalization issue. If the IRS could deem intercompany loans to be investments, it could treat the interest payments as dividends, which are not tax deductible. However tax authorities eventually determined these tools were inadequate, and that additional tools were necessary. According to Lessambo (2009), “In 1989, Congress enacted section 163(j) for excessive interest payments paid abroad” (p. 10). Many other countries began to develop similar rules around this time. According to von Brocke and Perez (2009), “In the late 1990s most developed countries began to introduce thin capitalization rules in order to restrict the implementation of abusive financing structures which might lead to the transfer of profits to another jurisdiction where the profits were taxed at a lower rate” (p. 29).

From inception, thin capitalization rules generally evaluated the firm’s balance sheet to determine if the Controlled Foreign Corporation’s (CFC’s) financing structure was excessively leveraged. von Brocke and Perez (2009) write, “In a first stage, the majority of these thin capitalization rules established the existence of safe harbours (e.g. debt-to-equity ratios) in order to force related companies to apply normal market conditions in their intra-group transactions” (p. 29). Lund, Korsgaard and Albertsen (2008) agree, writing “Specific rules aimed to discourage thin capitalization often require that the debt-to-equity ratio meet a specific ratio in order for the company to be allowed to deduct interest expenses” (p. 283).

However, since that time, several countries have shifted their approach to combat these financing strategies. Lund, Korsgaard and Albertsen (2008) write “In recent years, there has been a tendency for some countries to base their rules on a company’s operations, and more and more countries are introducing so-called interest limitation rules and earnings stripping rules” (p. 283).

Germany and Italy have recently adopted this approach. von Brocke and Perez (2009) believe debt-to-equity rules were ineffective, writing “it was very simple for companies to circumvent the limit established by debt-to-equity ratio by increasing the equity of the financed subsidiary in a manner sufficient to push down as much debt as necessary” (p. 29). In addition, several countries found their rules were inconsistent with the capital import neutrality principle, which also motivated those countries to develop alternative regulatory approaches.

One country, the United Kingdom, began by limiting the debt-to-equity ratio, and now relies exclusively upon the arm’s-length standard. The U.K. does not give taxpayers any firm financial guidelines or ratios, which may make it difficult for taxpayers to comply with the standard, and for regulators to enforce it. Developments in the United Kingdom will be discussed in more detail subsequently.

There are several other facets to thin capitalization rules that merit attention. One is that countries monitor thin capitalization rules in other countries when developing their own policies. van Saparoea (2009) writes that a “Netherlands legislator has been investigating the possibility of introducing new legislation that is similar to that applying in Germany” (p.7). von Brocke and Perez state “With the 2008 Budget law, the Italian parliament introduced new interest limitation rules inspired by the new German rules, and repealed thin capitalization rules which have been in place since 2003” (p. 33). In part this is driven by the search for more effective way to regulate this activity, but it may also be motivated by tax competition.

Several countries have altered their rules a number of times in the past decade. von Brocke and Perez (2009) write “the United Kingdom modified its thin capitalization rules three times between 1994 and 2004” (p. 29). They also explain Germany had thin capitalization rules which were changed in 2000, 2003, and 2007 (pp. 30-33). Describing developments in Germany, the Netherlands and the United Kingdom, van Saparoea’s article is entitled “Optimizing the Interest Deduction Rules—A Never-Ending Story” (p. 3). Frequent changes suggest it has been difficult

to craft these rules successfully. Several governments have monitored these rules regularly and have modified them to improve effectiveness. However other countries have developed more stable thin capitalization rules, for reasons to be discussed subsequently.

The Impact of Tax Competition

One of the driving forces behind international tax laws is tax competition. As MNEs must satisfy shareholders they seek to maximize net income, which motivates them to reduce income taxes. Gresik (2001) notes that MNEs have the ability to transfer operations from one country to another, and explains: “This flexibility not only helps transnationals minimize the cost of taxes and regulations imposed by national governments; it can also aid them in pitting one government against another” (p. 800). Because MNEs can move business operations easily, they have a negotiating advantage over taxing authorities.

Gresik argues tax competition deprives some countries of needed tax revenue. He writes “it is clear that one country’s choice of tax policy can impose fiscal externalities on another country” (p. 820). Beyond this, MNEs manage the information they provide to taxing authorities. Governments do not share tax return information without taxpayer agreement, creating an information asymmetry that benefits the MNE. As Gresik writes, “In the absence of shared information, the usual global efficiency losses arise because each country’s tax policies still impose negative externalities on the other” (p. 833).

Similarly, governments aim to develop tax policies that maximize a nation’s well-being. However the task confronting tax authorities and legislators can be challenging. While it is clear MNEs increase profits through lower tax rates, it is less clear whether governments benefit from increasing or decreasing income tax rates. Lowering tax rates may reduce tax revenues, at least initially. But lower taxes may also attract FDI, create jobs, and make businesses more competitive. Increasing tax rates might immediately raise tax revenue, but discourage FDI. Schön (2009) writes, “Governments know that a simple extension of the tax base or a raise of the

tax rate might not have the aspired revenue effect once mobile taxpayers relocated their residence or their activity/investment to another jurisdiction. There might be a fall in revenue, while a lowering of the tax base or rate might induce more investment, increasing both domestic welfare and the government budget” (p. 70). Some small countries, such as Singapore and Ireland, have adopted low tax strategies to attract investment. It is not entirely certain what the best economic strategy is, and countries need to balance prospects of attracting new investment against the immediate impact upon tax revenue. So not only do MNEs have an information advantage over governments, they have clearer objectives.

van Saparoea (2009) describes the government’s dilemma: “Anti-abuse legislation has over time become a challenging issue for tax authorities, which try to balance tax opportunities, on the one hand, and tax restrictions, on the other, within the constraints of retaining a competitive advantage, compared to other jurisdictions” (p. 3). In the absence of coordinated international tax policies, this clearly gives MNEs an advantage. In a global economy with mobile capital, one country can gain an advantage by offering lower income tax rates or less restrictive tax policies, at least in the short run. This pressures other countries to follow suit and match the tax rate cuts or to enact permissive tax regulations.

Evidence of Thin Capitalization/Earnings Stripping

While it is clear that MNEs could reduce their tax rate by leveraging debt on subsidiaries in high-tax jurisdictions, for some time no study conclusively demonstrated firms were doing so. Desai, Foley and Hines (2004) commented that “estimating the sensitivity of capital structure to tax incentives has proven remarkably difficult, due in part to measurement problems. Consequently, it is not surprising that several studies find no effect or unexpected relationships between tax incentives and the use of debt” (p. 2454).

However in recent years several studies have shown that firms leverage more debt on subsidiaries operating in countries imposing high income taxes. As Haufler and Runkel (2008) wrote, the evidence that high income tax rates motivate additional debt is “conclusive” (p. 1). In

addition, the studies also demonstrate that most of the additional debt is extended from related entities within the MNE, which allows the company to reduce its tax rate without incurring additional trade expenses.

Desai, Foley and Hines (2004) studied the leverage of 3,680 MNEs owning 32,342 related corporations during 1982, 1989 and 1994. The study focused on U.S. firms investing abroad. They concluded these firms increased debt in response to high tax rates. They write: “First, there is strong evidence that affiliates of multinational firms alter the overall level of composition of debt in response to tax incentives. The estimates imply 10% higher tax rates are associated with 2.8% greater affiliate debt as a fraction of assets, internal finance being particularly sensitive to tax differences. While the estimated elasticity of external borrowing with respect to the tax rate is 0.19, the estimated tax elasticity of borrowing from parent companies is 0.35” (p. 2452). In other words, when operating in high-tax jurisdictions, MNEs increased both trade and intercompany debt, but intercompany debt was more responsive to high income tax rates.

They also compared debt-to-equity levels in several countries. Desai, Foley and Hines write “affiliates in high-tax countries generally make greater use of debt to finance their assets than do affiliates in low-tax countries. Affiliates in tax havens such as Barbados have aggregate leverage ratios of 0.30 or less, while affiliates in high-tax countries such Japan and Italy have aggregate leverage ratios that exceed 0.53” (p. 2462).

A study of German companies reached similar conclusions. Mintz and Weichenrieder (2005) conducted a study of the outbound investments of 13,758 German-owned subsidiaries between 1996 and 2002. They also concluded there was a strong relationship between high income tax rates and subsidiary debt. They write, “We find that the tax rate in the host country has a sizeable and significantly positive effect on leverage” (p. 1).

Mintz and Weichenrieder said their results were similar to those in the study by Desai, Foley and Hines, writing “our estimates are largely in line with results derived from U.S.-owned subsidiaries” (p. 17). However they did find some differences in the behavior of German firms, as compared to U.S. based MNEs. They concluded German firms used very little third-party debt to achieve higher leverage, writing “German-owned subsidiaries rely almost exclusively on intra-company loans, while in U.S. studies the marginal effect of a tax change has turned out to be larger for third-party debt” (p. 17). In short, the German firms used little trade debt to achieve financial leverage.

Mintz and Weichenrieder also analyzed the debt ratios of wholly-owned versus partially-owned subsidiaries. They write “While wholly-owned firms experience a significant tax effect on their financial leverage, this is not the case for German subsidiaries that are less than 100% owned affiliates” (p. 17). They believed that minority shareholder interests complicated the process of extending related-party debt.

Seida and Wempe (2004) analyzed the impact of twelve corporate inversions, contrasting results with twenty-four similar corporations, in similar industries and with comparable annual revenue figures. They found that ICs realized substantial reductions in their effective tax rate (ETR) as a result of the corporate inversion. The pre-inversion tax rate fell from 32.01 percent to 20.44 percent after the inversion (p. 806). They wrote “The 11.57 percentage point percentage point reduction in mean ETR for the inversion sample is significantly greater than the mean ETR reduction for the control sample (approximately four percentage points)” (p. 806).

Furthermore, the study concluded the ETR decreased due to a substantial decline in U.S.-sourced income, primarily due to earning’s stripping. They write that “despite managers’ claims that inversion is necessary to avoid U.S. tax on foreign earnings, most of the observed inversion-related tax reduction is likely due to avoidance of U.S. tax on U.S. earnings through increased stripping of U.S. earnings to lower-tax foreign countries” (p. 825).

To summarize, all three studies demonstrated that MNEs transfer earnings from high-tax jurisdictions by leveraging subsidiaries with debt. Each of the three studies also concluded that the debt was lent by related entities, rather than third-parties.

Thin Capitalization/Interest Deduction Limits in the United States

U.S. corporate income taxes are among the highest in the world, rivaled only by Japan's 40% rate. The federal income tax rate is 35%, and most states also levy corporate income taxes, so the combined rate is approximately the same as Japan's.⁹ Given these high income tax rates and the size of the U.S. economy, the federal government should be alert to potential inbound thin capitalization activities.

U.S. thin capitalization rules were first implemented in 1989 when IRC section §163(j) was enacted. Section §163(j)(2)(A)(ii) applies

when "the ratio of debt to equity of such corporation as of the close of such taxable years (or any other day during the taxable year as the Secretary may by regulations prescribe) exceeds 1.5 to 1." When that condition is met, and the interest expense is greater than fifty percent of the adjusted taxable income of the business, that portion above fifty percent is not tax deductible. Thus both conditions must be met before tax deductible interest expenses are limited. Adjusted taxable income is calculated by adding back net interest expense, depreciation, amortization, depletion, and a net operating loss deduction to taxable income (Department of Treasury, 2007, p. 9). The excess interest is not deductible that year, but can be carried forward into future years. The initial rules only applied to debt extended from related parties, but in 1993 the law was expanded to include debt extended from unrelated parties, if guaranteed by a foreign or tax-exempt entity (Department of Treasury, 2007, p. 9).

⁹ See tables on page 43-44 for income tax rates in the G-7 countries.

The U.S. 1.5 to 1 debt-to-equity figure is a “safe harbor” rule. When the debt-to-equity ratio is below that figure, the IRS will not question whether the debt is excessive. If it is above the 1.5 to 1 ratio, the IRS may or may not determine the debt is excessive, based on an examination of all relevant facts and circumstances. To describe rules in several other countries the Department of Treasury (2007) wrote, “A debt-to-equity ratio is often used, but sometimes it is a strict limit (e.g. interest on any debt that exceeds the ratio is disallowed) rather than only a safe harbor as it is in the United States” (pp. 10-11).

While the U.S. debt-to-equity ratio is lower than that imposed in other nations, this does not necessarily demonstrate the rules are effective at achieving their objective. If the limitations are ineffective, firms can still shift income overseas through excessive debt. The U.S. Congress became concerned that earning’s stripping was depriving the U.S. Treasury of needed tax revenue, and in 2004 directed the Department of Treasury to study the impact of thin capitalization upon tax revenue.

To analyze this issue, the U.S. Treasury Department conducted two studies. The first compared the profitability of Foreign Controlled Domestic Corporations (FCDCs), which are owned 50% or more by foreign parties, and Domestically Controlled Corporations (DCCs). If FCDCs were less profitable than DCs, this might indicate earnings were being stripped out of the U.S. But this study did not reach a conclusion on that question.

The Department of Treasury study analyzed the 2004 tax returns for over 76,000 corporations, and determined DCCs were significantly more profitable than FCDCs.¹⁰ DCC profit levels averaged 4.3% of revenue, while FCDCs averaged 2.9% of revenue (Department of Treasury, 2007, p. 13). However the Department of Treasury study suggested this may be explained by the fact “that DCCs receive a substantial amount of income in the form of dividends and royalties,

¹⁰ Partnerships, Real Estate Investment Trusts and S-Co’s (small, domestic corporations) were excluded from the study to facilitate consistent comparisons, though the Department of Treasury acknowledged these entities could sometimes be financed through excessive debt.

mainly from subsidiaries abroad” (Department of Treasury, 2007, p. 14). Comparisons of operating income, which exclude dividends, royalties, interest revenue and expenses, and depreciation and amortization, demonstrate that FCDCs are actually more profitable than DCCs, registering profits at 6.3% of revenue, versus 5.5% of revenue for DCCs (p. 15). Furthermore, comparisons of interest paid/cash flow demonstrated that interest expenses for DCCs and FCDCs were roughly comparable (p. 18). Thus the study “did not find conclusive evidence that FCDCs have very high interest expense relative to cash flow compared to DCCs” (p. 21). Given these results, the Treasury Department reached no conclusion on earning’s stripping, but determined it needed to gather more information.

To analyze this topic further, in February 2009 the IRS released a new form, 8926, entitled *Disqualified Corporate Interest Expense Disallowed Under Section 163(j) and Related Information*. The purpose of the form is to collect more information to determine whether some FCDCs might be engaged in earning’s stripping activities. According to IRS Bulletin 2007-50, “Form 8926 solicits information relating to the determination and computation of a corporate taxpayer’s 163(j) limitation, including the determination of the taxpayer’s debt-to-equity ratio, net interest expense, adjusted taxable income, excess interest expense, total disqualified interest for the tax year and the amount of interest deduction disallowed under section 163(j), as well as certain information with respect to the related persons receiving disqualified interest.” The IRS plans to use this information to determine if earning’s stripping from the United States is occurring.

In the second study, the U.S. Department of Treasury analyzed the behavior of Inverted Corporations (ICs) to determine if they were engaged in earning’s stripping activities. An IC is a MNE that shifts its corporate headquarters from one country to another. A U.S. IC is relieved of the burden of the U.S. tax on worldwide earnings. In principle, taxes on U.S.-sourced income should not change. However the study determined, “data on ICs strongly suggest that these corporations are shifting substantially all of their income out of the United States, primarily through interest payments” (p. 21). Rules to combat thin capitalization were ineffective at

controlling this activity. The Department of Treasury study relied primarily upon the previously cited analysis by Seida and Wempe (2004) that analyzed the tax impact of corporate inversions.

As mentioned, Seida and Wempe determined that ICs substantially reduced their effective tax rate by shifting their corporate headquarters abroad, leveraging the U.S. entity with substantial debt, and transferring earnings to low-tax jurisdictions. Over the course of the study they found ICs reduced their effective tax rate (ETR) by 11.57 points, while comparable firms reduced their tax rate by approximately four points. Seida and Wempe did a detailed analysis of four firms and concluded the ETR reduction was “attributable to the stripping of U.S. earnings via intercompany interest payments” (p. 825). They found that all four firms substantially increased total and long-term intercompany debt after the inversion, much of it incurred by the U.S.-based entity (p. 816-817). Furthermore, they found that thin capitalization rules were not effective in limiting earning’s stripping. Seida and Wempe analyzed publically-available information, and did not have access to the firms’ tax returns. However they concluded that at least three of the firms, and possibly all four, had U.S. debt-to-equity ratios less than 1.5 to 1, the thin capitalization limit in the United States (p. 821). They found the debt-to-equity ratio for the fourth firm may or may not be below 1.5 to 1, depending upon how the firm consolidated its financial results for tax purposes. That firm’s debt-to-equity ratio may have been as low as .9 to 1, if its “Other Subsidiaries” were consolidated into the parent’s tax return.¹¹ Seida and Wempe (2004) did not specifically analyze whether the firm’s interest expenses exceeded 50% of EBITDA. However that limitation does not take effect if the debt-to-equity ratio is less than 1.5 to 1. Thus it is possible to strip all earnings from the US as long as the debt-to-equity ratio is not exceeded.

Congress passed legislation in 2004 (AJCA 2004) that addressed corporate inversions. It was specifically aimed at ICs in which “the former shareholders of the U.S. corporation hold (by

¹¹ Seida and Wempe (2004) specifically focused upon ICs, but note that other MNEs may be motivated to strip earnings from the U.S., as well. However they believe the incentives may not be as strong, writing “Foreign-domiciled firms (whose foreign domicile was not established via an inversion) with tax rates less than the U.S. rate have incentives to strip U.S. earnings. U.S.-domiciled firms also have incentives to strip U.S. earnings. However, their ability to do so is severely limited by statutory interest expense allocation rules...U.S.-domiciled firms achieve only *deferral* of income when U.S. earnings are stripped; foreign-domiciled firms (including inverted firms) achieve *permanent exclusion* of income stripped from the U.S.” (p. 806).

reason of holding stock in the U.S. corporation) 80 percent or more (by vote or value) of the stock of the foreign-incorporated entity after the transaction” (Joint Committee on Taxation, 2009, p. 58). IRC §7874 has significantly reduced this activity in the United States. According to Nadal (2008) “Under section 7874, inversions are disregarded when a foreign corporation acquires substantially all the assets of a domestic entity such that after the transaction, at least 80 percent of the foreign corporation’s shares are owned by former shareholders of the domestic entity and the expanded affiliate group does not have substantial commercial activities in the foreign corporation’s country of incorporation” (p. 3). When those conditions are met, the firm continues to be treated as a U.S. corporation for tax purposes.

Earlier this year the Obama administration released proposals to change international tax rules in a variety of ways, including the tax deductibility of interest expenses in limited situations. Because the Department of Treasury study did not provide evidence that overseas firms with domestic CFCs were stripping earnings outside the U.S., no changes were proposed to those rules. However as the Seida and Wempe (2004) study demonstrated Inverted Corporations were stripping earnings from the U.S., Congress enacted IRC §7874, which taxes Inverted Corporations as domestic entities. But IRC §7874 only taxed ICs as domestic entities when the 80% ownership threshold was met. Thus the Obama administration proposed a to lower this threshold to situations in which 60% of the stock in the new entity is owned by former shareholders of that corporation (Joint Committee on Taxation, 2009, p. 58). As mentioned, the entire international proposal was withdrawn in October, 2009, including these additional tax rules governing those ICs.

The details of the withdrawn IC rules merit review, as they reflect the administration’s thinking on thin capitalization regulations, and thus may shape future proposals. According to the Joint Committee on Taxation (2009) proposal, the 1.5 to 1 debt-to-equity safe harbor would have been eliminated, and ICs would be able to deduct interest only up to 25 percent of adjusted taxable income, versus 50 percent today (Joint Committee on Taxation, 2009, page 59). However the rules would only have applied upon interest paid to related parties. The interest cap remained at

50 percent of adjusted taxable income for interest paid to third-parties, when the debt is guaranteed by a related-party. The Joint Committee on Taxation summarized the proposal by stating, “By eliminating the debt-equity safe harbor, reducing the adjusted taxable income threshold from 50 percent to 25 percent for interest on related-party debt, limiting the carryforward of disallowed interest to 10 years, and eliminating the carryforward of excess limitation, the proposal significantly strengthens rules that appear ineffective in preventing certain recent earnings stripping arrangements in the context of corporate inversion transactions” (p. 61).

As mentioned previously, one way MNEs can avoid debt-to-equity constraints is by injecting both equity and debt into a subsidiary. If the MNE aims to reduce taxes, it can first calculate how much debt it wants to leverage on the subsidiary to strip earnings, and then calculate how much equity must be invested to comply with debt-to-equity limitations. While the worldwide enterprise’s external debt-to-equity ratio may be determined by the firm’s objective to balance shareholder risk and return, this is not necessarily the motivation for each internally-funded subsidiary. The optimal debt structure for a worldwide enterprise may not be the optimal debt structure for a subsidiary, particularly if that CFC operates in a country that imposes high income taxes.

Given these facts, it seems the United States may be too cautious in regulating earning’s stripping activities. The relationship between high income tax rates and debt has been demonstrated several times, and the U.S. corporate tax rates are among the highest in the world. Its current rules do not effectively limit earning’s stripping, as the Seida and Wempe (2004) study showed. Many other industrialized countries have taken more aggressive steps to control earning’s stripping, as later sections in this paper will demonstrate. As the United States looks to raise additional sources of tax revenue, it should aim to tighten existing rules which do not adequately control tax-motivated intercompany debt.

Thin Capitalization/Interest Deduction Limits in Germany

Germany initially implemented debt-to-equity limitations to control excessive financial leverage. Germany's tax deductible debt-to-equity limit ratio was 1.5 to 1 in most situations; however, it was 3 to 1 for holding companies (Strunin, 2003, p. 52). The rules were specifically aimed at combating situations in which a related party in another country extended loans to shift earnings from Germany. "The thin capitalization rules applicable until fiscal year 2003 were focussed specifically on the avoidance of abusive financing strategies in which the lender was a foreign shareholder or related party" (von Brocke and Perez, page 30). However Germany's approach prompted legal challenges in the European Court of Justice (ECJ).

In the 2002 *Lankhorst-Hohorst* case the ECJ determined that German anti-abuse rules violated the freedom of establishment standard in Article 43 of the EC Treaty. In that case a Dutch firm lent EUR 1.5 million to its German subsidiary, Lankhorst-Hohorst GmbH, in which it owned 100% of the shares. As part of the loan, the parent wrote a letter of support which waived the right to repayment in the event third party creditors made claims against the German subsidiary. This loan enabled the subsidiary to reduce its bank borrowing and its interest expense. German tax authorities denied the interest deduction and deemed the interest payments to the Dutch owner a dividend distribution, reasoning that a third-party would not have made a loan under the same conditions, given the firm's high level of indebtedness and the parent's agreement to waive repayment in favor of other creditors (von Brocke and Perez, 2009, p. 30).

However the ECJ determined the German tax rules treated domestic and international firms inequitably. It rejected arguments from German, Danish, and U.K. tax authorities, as well as the EU Commission, supporting the German law. German tax authorities had characterized the interest payments as dividends, and German tax law treated dividend payments to German and international firms differently. If a German resident corporation had extended the loan and it was deemed a dividend distribution, the parent would have been entitled to claim a tax credit for additional taxes due. However if a non-resident corporation extended the loan, and it were deemed a dividend distribution, the additional income would be taxed at a 30% rate. No tax

credits would apply. Thus domestic and international firms were treated differently, giving tax preferential treatment to domestically-owned German companies.

In response, the German government modified its article 8A by expanding scope so that it applied to all lending transactions, including German resident parent companies. Nonetheless, new German rules did not fully eliminate differences in treatment of domestic and international owners of German firms. von Brocke and Perez write “the deemed dividends appreciated in relation to German parent companies were 95% tax exempt, while if the lender were a foreign company, the deemed dividend would be subject to a withholding tax at the rate of 25%” unless a tax treaty offered a lower rate (p. 31). These rules again may not have complied with Article 43 of the EC treaty freedom of establishment clause, necessitating changes. In short, it appears that once the thin capitalization rules determined interest expenses should be treated as dividends, domestic and international parent companies were again taxed differently.

In addition, Germany sought to create a more attractive investment environment, and thus lowered income tax rates and simplified certain tax regulations. van Saparoea (2009) writes, “Germany has attempted to create an attractive tax jurisdiction by widening its tax base in the Corporate Tax Reform Act of 2008” (p. 6). This has been part of a longer term German strategy to make that country more attractive to investors. Becker, Fuest and Hemmelgarn (2006) write: “The main goals of the German Tax Reform 2000 were to improve the competitiveness of firms in Germany, to foster investment, to increase Germany’s attractiveness to foreign investors and to adapt the corporate tax system to the rules of the EC common market” (p. 6). As part of this longer term strategy, Germany has overhauled its tax legislation on thin capitalization, and has shifted from focusing on debt-to-equity ratios to an emphasis upon limiting interest expense deductions. An advantage of these rules is that they directly limit interest deductions, and thus sidestep the complexities of characterizing interest expenses as dividends.

Germany recently passed a General Interest Disallowance Rule, which was phased in during 2007 and 2008. The rule does not reference balance sheet debt, and it limits the net interest expense of a corporation to 30% of the taxable income before interest expense, taxes, depreciation and amortization expenses (EBITDA). Net interest expense is defined as interest revenue less interest expense. Bagel and Huning (2008) write “The scope of the new rules is far broader than former thin capitalization rules, as any third-party debt financing (whether or not there is back-to-back financing) is included” (p. 310). The interest deduction rules apply when the business is part of a controlled group, which is defined as an enterprise that is or may be included in consolidated financial statements, prepared according to IFRS, U.S. GAAP or German GAAP standards. When interest expenses are disallowed they can be carried forward indefinitely.

The German rules offer three exceptions to these interest limitation rules. First, to be administratively efficient a *de minimis* rule states the interest limitation does not apply when firms incur net interest expenses less than EUR one million per year. Second, a “stand alone clause” provides an exception if the relevant business is not fully consolidated into the worldwide enterprise’s results, for either financial or business control reasons. Third, an exception is granted if the business belongs to a worldwide enterprise, and the ratio of equity-to-assets for the subsidiary is greater than or comes within one percentage point of the equity-to-assets ratio of the worldwide enterprise. In other words, if the subsidiary is less leveraged than the worldwide enterprise, or is no more than one percent more leveraged than the worldwide business, the firm is not constrained by the interest limitation rule (van Saparoea, 2009, p. 6).

The new German rules appear to have several advantages over their prior regulations. First, these rules may in part avoid the foreign neutrality problems inherent in their other laws. Limiting interest expense deductions may circumvent complexities in recharacterizing interest payments as dividends. Second, debt-to-equity ratio limitations may not always prevent earnings stripping. A related party might extend substantial debt and equity, comply with debt-to-equity ratio limitations, and still generate enough interest expense to strip earnings from one

jurisdiction to another. Limiting interest deductions appears to be more effective by directly addressing the real concern of tax authorities: reduced tax receipts. Finally, the rules avoid the issue of whether one debt-to-equity ratio is correct for all businesses. Some industries rely on more debt to fund operations than do other firms, and the same debt-to-equity ratio limit for all firms may appear arbitrary.

While the interest limitation approach appears to resolve a number of the issues associated with thin capitalization rules, it is not clear the 30% interest expense limitation is the correct figure for all businesses. The third escape clause, which exempts CFCs that are less leveraged than the worldwide enterprise, may resolve part of this concern. If the consolidated firm is funded with substantial debt, and the CFC has a higher equity-to-assets ratio (or within one percentage point) the escape clause exempts that firm. However there is an alternative scenario to consider. If the worldwide enterprise incurred minimal debt and recognized low interest expenses, the 30% of EBITDA cap may permit the enterprise to fund subsidiaries with a far greater portion of debt than the enterprise would incur. This may permit the MNE to strip earnings from high-tax jurisdictions in ways inconsistent with the enterprise's funding strategy.

In addition, the new German rules may not avoid all challenges based on the freedom of establishment clause in the EC treaty. von Brocke and Perez write the rules "may also contravene the freedom of establishment and the free movement of capital by way of a hidden discrimination" (p. 34). If a German parent owns a German subsidiary it can be treated as one business under its tax laws, and thus could be exempted from the rules under the previously mentioned "stand alone" clause. This opportunity is not open to German firms owned by a foreign parent, so the rules could again be challenged. The German government is likely to argue these rules are within its authority, and it is not certain how the ECJ will rule.

Thin Capitalization/Interest Deduction Limits in the United Kingdom

The United Kingdom's tax regulators have struggled with the same challenge encountered by German tax authorities. To minimize earning's stripping their regulations have aimed to prevent MNEs from leveraging businesses with excessive debt extended from related foreign entities. But the rules also need to comply with requirements to treat domestic and internationally owned firms equally. Achieving both objectives has been a difficult challenge.

The United Kingdom has regulated highly leveraged financing structures since the 1990s. von Brocke and Perez (2009) write "the United Kingdom modified its thin capitalization rules three times between 1994 and 2004, in order to introduce the arms-length principle and to guarantee an equal treatment of UK resident companies, and companies resident in an EU Member State..." (p. 29). U.K. thin capitalization rules were challenged in the European Court of Justice (ECJ) in the *Test Claimants in the Thin Cap Group Litigation*¹² case. As the regulations were modified several times, the court's rulings addressed the different regulations in effect over that period. According to von Brocke and Perez (2009) "the ECJ concluded that even prior to 1995 and, in any case, between 1995 and 2004, when interest was paid by a resident company in respect of a loan granted by a related non-resident company, the tax position of the former company was less advantageous than that of a resident borrowing company which had been granted a loan by a related resident company" (p. 31). When interest expenses were recharacterized as distributions, the U.K. rules provided more favorable tax treatment when the lender was also subject to U.K. tax rules. Thus U.K.-owned enterprise's had an advantage over internationally-owned businesses. As such, the ECJ determined "the U.K. thin capitalization rules contravened the freedom of establishment clause in Article 43 of the EC Treaty" (von Brocke and Perez, 2009, p. 31).

The U.K. now relies upon the arm's length principle to regulate excessively leveraged financing structures. According to HMRC, "In tax terms a UK company (which may be part of a group)

¹² ECJ. Case C-524/04, 13 March 2007, ECR (2007) 2107.

may be said to be thinly capitalized when it has excessive debt in relation to its arm's length borrowing capacity, leading to the possibility of excessive interest deductions."¹³ Furthermore: "The arm's length borrowing capacity of a UK company is the amount of debt which it could and would have taken from an independent lender as a stand alone entity rather than as part of a multinational group."¹⁴

The U.K. rules then specify the process regulators should use to determine whether a firm is thinly capitalized. First, it is necessary to "ascertain how much the company or companies would have been able to borrow from an independent lender."¹⁵ This figure must be compared with "the amounts actually borrowed from group companies or with backing of group companies."¹⁶ The regulations then deny tax deduction for interest expenses that exceed a firm's arm's length debt capacity.

These transfer pricing rules apply when one entity loans funds to another organization it controls, or when both organizations are controlled by the same party (Kyte, 2008, p. 348). According to HMRC, "the borrowing capacity of a UK company must be assessed on a stand alone basis, disregarding any relationship with other group companies..."¹⁷ Thus it is a hypothetical debt capacity. As a result, firms may be motivated to determine the maximum amount they could borrow, whether or not they would actually do so. In other words, the more firms can use the arm's-length standard to demonstrate they could borrow large sums of money, the more earnings they can strip to another jurisdiction. According to HMRC: "It follows that in establishing the arm's length borrowing capacity of a particular borrower, it is necessary to hypothesise that the borrower is a separate entity from the larger group of which it is part."¹⁸

¹³ See HMRC INTM541010—Introduction to thin capitalization (legislation and principles)

¹⁴ Ibid

¹⁵ See INTM541020—Introduction to thin capitalization (legislation and principle)

¹⁶ Ibid

¹⁷ See HMRC INTM56100—Thin capitalization: FA 2004 legislation—main changes to the thin capitalization legislation.

¹⁸ See INTM541010: Introduction the thin capitalization (legislation and principles)

The U.K. legislation also applies when the entities engage in a series of related lending transactions, culminating in a third-party loan. In short, the rules specifically state they intend to apply the substance over form doctrine. The rules do not include any safe harbors, exceptions, or sourcing rules for interest expenses. They also exclude debt borrowed for an undefined “unallowable purpose” (van Saproea, p. 7).

One key question with the U.K.’s approach is whether it gives taxpayers sufficient guidance to determine whether their debts or interest expenses are excessive. To comply with the U.K.’s requirements taxpayers may need more specific direction concerning how much debt violates the arm’s length standard. Furthermore, it can be difficult to determine the CFC’s stand-alone debt capacity, as this is a hypothetical exercise. CFCs have little experience doing this, and lenders have no incentive to evaluate the organization’s hypothetical, stand-alone debt capacity. Lending rules of thumb may be helpful in determining a range of debt capacities, but actual loan agreements are often the result of detailed discussions between lender and borrower, in which trade-offs between debt limits, collateral, and loan covenants are negotiated. The U.K.’s approach gives taxpayers little guidance and conflicts with the certainty principle. The absence of clear regulations also increases the likelihood of costly litigation. This can also make the enforcing rules very inefficient. This may be why no other major country has chosen this approach.

Furthermore, many companies may have capacity to incur more debt than they actually choose to accept. Firms may consciously choose to minimize debt because they do not wish to incur the additional risks, interest expenses, or operating restrictions that may accompany debt. Some businesses believe avoiding debt gives them more freedom to manage their operations without intrusive loan covenants. A subsidiary may have the arm’s length capacity to incur more debt, but this does not mean additional debt is consistent with the enterprise’s business strategy. If a MNE’s strategy includes keeping debt levels low, it may not make sense to permit subsidiaries to leverage themselves with intercompany debt to reduce the firm’s worldwide tax expense.

A number of studies have demonstrated that many firms incur substantially less debt than they could borrow. Allen's study (2000) of Australian, British and Japanese firms demonstrated firms in those countries have spare debt capacity. Allen defined spare borrowing capacity as "mobile uncommitted pool of capital resources that a company possesses" (p. 300). He wrote it "may take the form of committed or uncommitted lines of credit and bank loans, or a level of current borrowing which is substantially below the upper limit that the company's management, bankers and creditors regard as being prudent" (p. 30).

Allen was not seeking to determine whether firms have spare debt capacity, as that had been demonstrated in a number of prior studies.¹⁹ However it is one of the most recent studies. Allen believed spare debt capacity was a signaling tool firms used to communicate to investors they had financial resources available. Because Japanese firms frequently are members of a keiretsu, in which firms have developed close and long-term banking relationships, Allen believed fewer Japanese firms would need to signal spare debt capacity to investors. He believed investors in Japanese firms understood those firms had banking relationships that could be counted on for financial support, should the need arise.

Allen said prior studies indicated that spare borrowing capacity was often maintained to signal investors the firm had the ability to tap into financial resources immediately should they need to do so. Allen surveyed Australian, British and Japanese firms to determine if they maintained spare borrowing capacity. They were asked how much spare borrowing capacity they kept, the reasons for maintaining unused lines of credit or spare borrowing capacity, and whether they had a target debt ratio, or an upper limit. Allen reported that 56% of Australian firms, 88% of British firms, and 32% of Japanese firms had a policy of maintaining spare borrowing capacity (p. 309). Firms reported they had a variety of unused bank lines of credit to support their needs, as well as

¹⁹ In his literature review, Allen cited a number of prior studies, including: Donaldson, G. (1961) *Corporate Debt Capacity*. Harvard University Press, Cambridge, MA. Also cited was Fama, E.F. (1990). Contract costs and financing decisions, *Journal of Business*, Vol. 63, 71-91. A third example was: Duan, J. & Yoon, S. (1993). Loan commitments, investment decisions, and the signaling equilibrium. *Journal of Banking and Finance*. Vol. 17, 645-661.

overdraft facilities. Businesses reported a variety of reasons for spare borrowing capacity, including the desire to have funds available for special projects, reserves for crises, acquisitions, and unplanned circumstances and opportunities. Furthermore, Allen reported “The larger the company, the more likely it is to have such a policy” (p. 310). Allen also concluded that many firms could borrow significantly more without facing higher interest rates. “Some 63% of the Australian respondents and 89% of the British ones consider that they could borrow 20% or more than existing borrowings without increasing their average borrowing costs. The evidence suggests fairly extensive spare debt capacity existed at the time of the survey” (p. 314). Allen concluded that “spare borrowing capacity is a relatively common policy” (p. 318).

Industrialist David Packard, co-founder of Hewlett-Packard, explained his reasoning for avoiding debt. He said HP eschewed long-term debt, in large part because the founders feared loss of control to lenders. They also believed avoiding long-term debt imposed financial discipline on the firm. Co-founder David Packard (1995) wrote, “Bill (Hewlett) and I determined we would operate our company on a pay-as-you-go basis, financing our growth primarily out of earnings rather than by borrowing money” (p. 84). Commenting upon proponents of leveraged capital structures, Packard said “The advocates of this approach say you can make your profits go further by leveraging them. That may be, but at HP it was our firm policy to pay as we go and not incur substantial debt” (p. 85). The firm had the capacity to incur debt, but would not do so. If a business avoids commercial debt, should its subsidiaries be able to incur tax-deductible intercompany debt, simply because its subsidiaries have the capacity to accept loans? If intercompany debt is incurred only to minimize taxes, it could be argued this is inconsistent with the business purpose doctrine.

This information suggests that the U.K. approach on debt capacity may be too lenient. Limiting a CFC’s debt-to-equity ratio by referencing what the firm could have borrowed in external markets may sound logical, but Allen’s study showed that 88% of British firms had spare borrowing capacity. Firms were capable of borrowing more debt than they incurred. It may

make more sense to limit debt by referencing what the worldwide enterprise actually chooses to borrow, rather than by what a CFC theoretically could borrow.

In a related development, HM Revenue and Customs (HMRC) has introduced a tax proposal that in some situations may limit the tax deductibility of interest expenses there. The legislation, commonly called the worldwide debt cap, became effective January 1, 2010. The legislation is aimed at limiting tax deductible interest expense for companies that incur the great majority of their debt in the U.K. It is specifically aimed at large businesses and applies to both U.K. and foreign headquartered firms, but Dodwell, Bird, Buck and Richards (2009) say “HMRC anticipates that the debt cap rules would apply to relatively few U.K. inbound groups” (p. 1).

The new proposal was first mentioned in a 2007 discussion paper²⁰ in which the U.K. government suggested it favored a new approach, which van Sapperoa said would limit debt “to the external borrowings of the group as a whole” (p. 7). According to Dodwell, Bird, Buck and Richards (2009) U.K. tax authorities’ proposal “would be capped by reference to the worldwide group’s net external borrowing costs in its consolidated accounts” (p. 1). The rules apply to companies that contain at least one U.K. firm (or a U.K. permanent establishment). “The rule is targeted at situations in which a UK group bears more debt than is required for the worldwide group to operate” (Dodwell, Bird, Buck and Richards, 2009, p. 1).

The Worldwide Debt cap legislation is specifically aimed at large businesses, and excludes all businesses defined a “micro, small and medium-sized enterprises as defined in the Annex to Commission Recommendation 2003/361/EC” (HMRC Draft Bill, 2009, p. 9). In short, HMRC believes it would not be cost-effective to apply the debt limitation to small firms. HMRC writes “A de minimis limit is introduced for purposes of excluding amounts that the government does not consider material for purposes of the debt cap” (HMRC, Worldwide Debt Cap Current Thinking, 2009, p.1).

²⁰ HMRC, “Taxation of the foreign profits of companies: a discussion document,” (21 June 2007) Chapter 5.

Two figures must be calculated to determine if the interest limitations apply. Under the U.K. legislation, one figure is the “tested amount,” and the second figure is the “available amount.” According to HMRC “Worldwide Debt Cap Current Thinking” (7 April, 2009) the tested amount is “the total intra-group finance expenses in the UK” (p. 1). This must be compared with the available amount, which is “the net external finance expense of the worldwide group from consolidated accounts” (p. 1). The rule states that “Any excess of the tested amount over the available amount is disallowed, but the worldwide group may reduce the amount of UK taxable receipts to match the disallowance that arises” (p. 1). In brief, the limits apply when the internal finance costs of the U.K. firm exceed the external finance costs of the worldwide enterprise. If a subsidiary bears only a small portion of a firm’s worldwide debt, these rules would not apply.

However comparing a subsidiary’s finance expense with that of the worldwide enterprise is an idea that has merit. As mentioned previously, Germany’s current rules provide an exception for subsidiaries that are no more leveraged than the worldwide enterprise. In addition, Japan allows firms to measure their debt-to-equity ratio with similar Japanese firms to determine if they are excessively leveraged. Comparing a subsidiary’s debt or interest expense to the worldwide business, or to a similar enterprise, may be a fairer and more efficient rule than uniform, somewhat arbitrary limitations. Some industries and firms choose to incur more debt than others as part of their funding strategy, and “fair” regulations should not penalize such firms.

Thin Capitalization/Interest Deduction Limits in Other G-7 Countries

Analysis of rules in Germany, the United Kingdom and the United States illustrate many of the challenges inherent in drafting effective thin capitalization/earning’s stripping tax legislation. However rules in the other G-7 countries may help to demonstrate other difficulties economically powerful nations face when crafting these rules.

Italy’s approach is closely modeled after Germany’s. It also abandoned a debt-to-equity test in favor of income statement limitations, effective January 1, 2008. von Brocke and Perez (2009)

say that Italy's rules were "inspired by the new German rules" (p. 33). The rules also restrict net interest expense to 30% of EBITDA, the same figure selected by German legislators (p. 34). Like the German rules, they also apply to interest paid to non-related parties, such as banks.

Italian legislators made several changes to the German law. According to Polombo (2008) the 30% interest limitation applies to financial statements prepared according to Italian GAAP (p. 319), not taxable income. Italian legislators also took additional steps to ensure their laws regulated domestic and international firms equitably. von Brock and Perez write "The Italian parliament has avoided one problem under the German rules by extending the benefits of group relief...to foreign companies of a group, provided that the foreign company meets all the condition foreseen under Italian law for the formation of a consolidated group except the residence requirement" (p. 34). Italian legislators were concerned German regulations may be challenged once again under the freedom of establishment clause. Polombo also notes that disallowed interest deductions can be carried forward indefinitely into the future (p. 319).

France is the last G-7 European country currently relying upon the debt-to-equity ratio to limit excessive financial leverage. According to Galinier-Warrain (2008), France modified its thin capitalization policies, effective January 1, 2007, and they are described as "quite complex" (p. 307). The key elements to France's thin capitalization/interest deduction rules are that they cap the debt-to-equity ratio at 1.5 to 1, and interest may be non-deductible when "the amount of interest exceeds 25% of the current pre-tax result, increased notably by intra-group loan interest and the depreciation considered to determine this pre-tax result" (p. 308).

Under France's new law, the debt-to-equity ratio now is calculated based on a firm's net equity, rather than contributed capital. The firm can elect to use either net equity at the beginning of the year or at the end. Debt now includes all debt extended from related parties, while prior rules included only loans extended from direct shareholders. Firms can carry forward non-deductible

interest expenses, however after two years the carry-forwards are discounted by 5% per annum. In general France's new rules tighten interest deductibility restrictions.

Canada began to evaluate thin capitalization legislation in 1969, when a White Paper on Tax Reform proposed limiting interest deductibility when a nonresident shareholder owns at least 25 percent of the Canadian corporation, lends money to that corporation, and the firm's debt-to-equity ratio exceeds three to one (Nitikman, 2000, pp. 23-24). The rules were enacted in 1972 and they are contained in subsections 18(4) to 18(6) of Canada's Income Tax Act.

The debt-to-ratio was reduced to two to one in 2001. This change was apparently motivated by a Canadian Department of Finance study which stated that other countries were reducing their debt-to-equity ratio below three to one. Farrar and Mawani (2008) believe very little analysis went into the decision to change the ratio, writing "no clear justification for this reduction appears to have been given. Perhaps the Department of Finance relied on the recommendation from the Mintz Report,²¹ which suggested a reduction because at that time other (unidentified) countries had reduced their ratios to 2:1" (p. 6).

Farrar and Mawani (2008) conducted a study of 3,715 Canadian firms in 64 industries to determine their debt-to-equity ratios. They found the mean debt-to-equity ratio for Canadian firms was 1.06 to 1, and that four industries had debt-to-equity ratios that exceeded 2:1 (pp. 16-17). Of the four "only the real estate industry had a debt-equity ratio exceeding 2:1 with statistical significance," but 7.1% of individual firms had debt-to-equity ratios exceeding 2:1. While Farrar and Mawani concluded Canada's 2:1 ratio "seems reasonable," (p. 2), the mean debt-to equity during 2001-2005 ranged from a high of 4.2 to 1 to a low of 0.15 to 1 (p. 35), which might also suggest that it is very difficult to determine one ratio that is fair and effective for all firms and industries. It could be argued that the 2:1 ratio is too low for 7.1% of

²¹ The Mintz Report was a 1998 Department of Finance Report which suggested changes to Canada's thin capitalization rules.

businesses. But at the same time, it might be too high for the remaining businesses. If the worldwide enterprise firm chooses to keep its debt levels low, a 2:1 debt-to-equity ratio may encourage firms to incur intercompany debt for the sole purpose of reducing income taxes.

Japan's first thin capitalization rules were introduced in 1992 and current rules have been in place since 2006, according to Nakamura (2008, pp. 321-322). In most cases Japan's thin capitalization rules apply when a firm's debt-to-equity ratio exceeds three to one. They phase out interest deductions when the ratio of "interest-bearing debt to foreign controlling shareholders and third parties in specified cases" (p. 323) is greater than three times the firm's equity. The rules apply both to Japanese companies and foreign companies operating there. A two to one ratio applies in certain situations. If a company has engaged in large bond repurchase transactions, this debt can be excluded from the calculation, and the lower ratio applies.

Japanese thin capitalization rules also permit an alternative measure, in place of the debt-to-equity ratios above. Nakamura writes that "a company has the option to use the debt-to-equity ratio of a comparable Japanese company operating in the same business, and having similar characteristics as to size" (p. 323). Thus we see examples in Germany and Japan where rules reference market debt-to-equity ratios. Such approaches may be a more effective approach to arrive at an appropriate debt-to-equity ratio for a CFC. Identifying one debt-to-ratio for all businesses is inherently problematic, and can be viewed as "unfair" by certain businesses that tend to incur more debt, such as the 7.1% of Canadian firms mentioned. However, as pointed out previously, any debt-to-equity ratio may not be effective, as it does not limit the absolute level of debt, and thus interest expenses. It would be more effective to adopt the approach Germany and Italy have selected, and limit interest expenses to a percentage of EBITDA.

The following table provides a brief summary of thin capitalization/interest deduction rules in each of the G-7 countries:

TABLE I: Summary of Thin Capitalization/Interest Deduction Policies in G-7 countries:

Country/ Max. 2009 Corp. Tax Rate ²²	2006 Pop- ulation	Rules to limit financial leverage?	Approach to limit abuse	Financial Tests	Comments
Canada/ 31.32%	32.6M	Yes	Balance Sheet Test	Debt to equity ratio not to exceed 2 to 1	Original 3 to 1 ratio was modified in 2001
France/ 34.43%	60.7M	Yes	Balance Sheet and Income Statement Test	Debt to equity ratio should not exceed 1.5 to 1, and interest expenses should not exceed 25% of pre-tax income, after interest and depreciation are added back	Implemented new law January 1, 2007. The law has a broader definition of equity, and debt includes all debt extended from related parties, not only shareholders
Germany/ 30.18%	82.7M	Yes	Income Statement Test	Net interest expense limited to 30% of EBITDA	Rules changed in 2001, 2003 and 2008. Most recent change shifted from thin capitalization test to interest deduction limits
Italy/ 27.50%	58.1M	Yes	Income Statement Test	Net interest expense limited to 30% of EBITDA	New laws implemented January 1, 2008. Changed from thin capitalization

²² Corporate tax rates for all G-7 countries were obtained from the OECD Tax Database

<http://www.oecd.org/ctp/taxadatabase>. See Table II.1.

					test to interest deduction limits
Japan/ 39.54%	128.2M	Yes	Balance Sheet Test	Debt-to-equity ratio not to exceed 3 to 1	Firms have the option of using the debt-to-equity ratio of a similar Japanese firm
United Kingdom/ 28%	59.8M	Yes	Arms-length principle	No specific financial test or safe-harbor ratio	Rules changed three times between 1994 and 2004. Worldwide Debt Cap legislation in process
United States/ 39.10% ²³	301.0M	Yes	Balance Sheet test which limits interest expense deductibility	If debt-to-equity ratio exceeds 1.5 to 1, interest expenses > 50% of EBITDA not deductible	The 1.5 to 1 debt-to-equity ratio is a “safe harbor.” The IRS will presume ratios below 1.5 to 1 are not excessively leveraged, but ratios above 1.5 to 1 may or may not be challenged

Thin Capitalization/Interest Deduction Limits in Other Key Countries

In addition to the G-7 countries, there are a number of other countries that are concerned with the tax impact of leveraged financing structures, and have developed innovative regulations rules that deserve special attention. Three countries that have created ambitious thin capitalization/interest deduction limitations are Denmark, the Netherlands, and New Zealand.

²³ The maximum U.S. federal statutory tax rate is 35%, but the great majority of U.S. states also impose income taxes, pushing the combined rate to approximately 40%. It can be higher or lower than that figure depending upon the states in which the business operates.

Each country has a smaller economy and population than the G-7 countries, yet each is also a prosperous nation that has developed advanced social programs dependent upon generating tax revenue.

Denmark has developed sophisticated thin capitalization rules that are considered “very complicated and detailed” (Lund and Korsgaard, 2008, p. 302). Denmark’s approach is to limit interest deductions by a series of three limitations, each of which can successively reduce tax deductible interest expenses. The first restriction limits the deductibility of debts extended from related parties. The second limitation establishes a limit based on the value of a firm’s qualifying assets. And the third limitation caps net financing expenses based on the firm’s Earnings Before Interest and Taxes (EBIT).

According to Lund and Korsgaard (2008), under the first limitation “interest expenses on controlled debt are not deductible to the extent that the debt-to-equity ratio exceeds 4:1” (p. 302). The rules do not apply to interest on debts less than DKK 10 million, or to loans extended by private individuals. If a company can document that a similar loan could be obtained from an independent party, the four to one debt-to-equity limitation may not apply. However the rules apply both to loans extended by related parties, and to loans extended by third parties if they are collateralized by related party assets.

Under the second limitation, “companies may deduct net financing expenses only to the extent that the expense does not exceed a standard rate of interest...on certain qualifying assets” (Lund and Korsgaard, 2008, p. 302). In 2009 that interest rate was 6.5% (Bundgaard and Tell, 2010, p. 7). The interest rate is applied upon the tax value of assets at year end to determine the interest ceiling limitation. Fixed assets are valued net of accumulated depreciation; non-depreciable assets are valued at cost plus the cost any improvements; internally developed intangible assets are not valued unless the costs are capitalized for tax purposes; and inventory, receivables and work-in-process are valued net of any reserves. That figure is compared with net financing

expenses, which are defined as the sum of taxable interest income less deductible interest expenses, excluding interest on trade accounts payable and trade receivables, trading losses, loan losses, and gains and losses on foreign exchange gains and losses. The rules apply both to debts extended from both related and third parties. Interest expenses above the limitation are not deductible and cannot be carried forward. The rules only apply when net financing expenses exceed 21.3 million DKK (Bundgaard and Tell, 2010, p. 9). This *de minimis* figure is adjusted annually.

Finally, a third Danish interest limitation rule restricts interest to a percentage of Earnings Before Interest and Taxes (EBIT). Kaserer (2008) writes, “Most prominently, Denmark extended its thin capitalization rule by an interest stripping rule restricting a firm’s interest deductions to 80% of EBIT” (p. 3). Kaserer notes that similar rules were adopted in Germany and Italy, but those rules limit interest expenses to 30% of EBITDA. The U.S. limits interest expenses to 50% of adjusted taxable income, but only if the 1.5 to 1 debt-to-equity ratio is exceeded.

Similar to the G-7 countries, the Netherlands attempts to balance the competing goals of raising tax revenue and creating an attractive investment environment. van Saparoea (2009) comments, “For Asian and American companies in particular, the Netherlands has long been one of the preferred jurisdictions in Europe in which to develop a base. Numerous international operations have derived significant tax benefits from using the Netherlands as an international base; thereby contributing to a reduction in their worldwide tax burden” (p. 5). Not only do MNEs reduce their tax rate, the Netherlands generates tax revenue from the MNEs, so its tax policies are mutually advantageous.

The Netherlands’ current rules were implemented effective January 1, 2004. These rules identify two tests to determine whether interest expenses are tax deductible. Sporken (2004) says “The first test concerns the debt-to-equity ratio of the taxable company itself, which may be 3:1 at a maximum” (p. 329). Debt is defined as average payables less average receivables, so the rules

measure net debt, rather than gross obligations. This figure is compared to average equity for tax purposes. The rules also specify that firms must use an equity figure of at least one EUR, even if average equity is determined to be less than that figure. If the debt-to-equity ratio exceeds 3:1 and the excess is greater than 500,000 EUR, the associated interest expense is not tax deductible. However “The amount of interest that is not deductible cannot, however, be greater than the amount of interest on loans payable to entities that are related to the taxpayer less the amount of interest on loans payable by the entities to the taxpayer” (van Saparoea, 2009, p. 4).

The second option is to use the worldwide enterprise’s debt-to-equity ratio. van Saparoea (2009) writes, “Specifically, if the taxpayer in its tax return opts for this group ratio (the second ratio), its excess debt is held to be the amount by which its average debt:equity ratio exceeds the average debt:equity ratio of the group to which it belongs” (p. 4). If the taxpayer belongs to more than one group the highest debt-to-equity ratio applies. The taxpayer can select whether it wants the three to one ratio or the worldwide enterprise’s debt-to-equity ratio to apply, and firms are annually permitted to select the measure by which its debts will be tested.

To prevent abuse and maintain tax revenue, the Netherlands’ rules also identify a number of specific cases in which interest is not tax deductible. According to Sporken (2008) interest is deductible “unless the expense cannot be considered a business expense or when specific anti-abuse rules apply” (p. 328). If a Netherlands corporation incurs debt to fund profit distributions, fund investments in related entities, or acquire a related-entity the associated interest expense may not be tax deductible. However the rules also provide two exceptions to these limitations. If the loans are taken for sound business reasons, or if the income is taxed at a reasonable level, which is generally defined as 10% of income, these rules do not apply (van Saparoea, 2009, p. 5).

In January of 2008 the Netherlands amended these regulations. Specifically, the exception that allowed firms to incur debt, as long as the associated interest income was taxed at 10%, was modified. According to van Saparoea, legislators in the Netherlands “feared that maintaining the second exception...without amendment would have adverse budgetary consequences” (p. 5).

For example, since Cyprus's income tax rate is 10%, and the Netherlands' is 25.5%, a MNE could establish a subsidiary in Cyprus, extend debt to a related-entity in the Netherlands, and substantially reduce income taxes. van Saparoea (2008) writes "The amended law states that, in situations in which a taxpayer can sufficiently demonstrate that its interest income is taxable at a rate of at least 10%, it would nevertheless remain possible for a tax inspector to substantiate that either a debt itself or a transaction that corresponds to it lacks a sound business reason" (p. 5). In short, legislators wanted to maintain the power to tax such income in the Netherlands, even if the profits were shifted to a jurisdiction taxing the income at 10% or more.

According to van Saparoea (2008) the Netherlands is already considering changing this rule "because the current rules could damage the attractiveness of the Netherlands as a business location" (p. 3). van Saparoea says the amended rules have increased uncertainty for MNEs, as they do not know whether tax authorities will challenge interest deductions in many situations. MNEs are also concerned their profits could be taxed twice. Beyond this, three Netherlands tax professors have written the amendment may not comply with the EC freedom of establishment clause.²⁴ Thus it is possible the 2008 amendment may be relaxed, though no changes have been enacted at this time.

New Zealand has also developed creative rules to limit thin capitalization/earning's stripping activities. Smith and Dunmore (2003) write that New Zealand's rules were implemented in 1996, noting, "The reason for introducing the thin capitalization rules then was to complement the new transfer pricing rules being enacted at the same time. It was believed that the absence of any formal thin capitalization rules when the new transfer pricing rules were being introduced could give rise to opportunities for tax avoidance and create uncertainty in the minds of foreign investors as to New Zealand's stance on thin capitalization. It was also thought that clarity of the tax policy and of the tax regime was essential to promote foreign investment in New Zealand"

²⁴ Prof. Mr. F.A. Englen, Prof. Dr. H. Vording and Prof. Mr. S. Weeghel, "Wijzinking van belastingwetten met het oog op het tegengaan van uitholling van de belastinggrondslag en het verbeteren van het fiscale vestigingsklimaat." *Weekblad Fiscaal Recht* 6777, 28 August 2008.

(p. 505). In short, they recognized that taxpayers desire certainty when calculating tax obligations.

New Zealand's thin capitalization rules apply only to firms that meet an ownership test. They specifically apply to taxpayers in three categories. The rules affect: 1) non-residents; 2) a New Zealand resident company in which a non resident owns 50% or more of the firm; and 3) trustees of a non-qualifying trust, controlled 50% or more by a non-resident (Smith and Dunmore, 2003, pp. 505-506). If the taxpayer falls into one of those categories at any point during the year, the rules apply. Thus the rules do not apply to New Zealand residents, and they would fail to meet the freedom of establishment clause in the EU treaty, were New Zealand a member.

If the ownership test is met, two further tests are applied to determine if the debt is excessive. The first is a "safe-harbour debt percentage of 75%" (Smith and Dunmore, 2003, p. 505). In other words, if a firm's debt-to-equity ratio is less than three to one, the debt is not considered excessive. According to Smith and Dunmore, "The safe-harbour debt percentage is designed to reduce compliance costs of taxpayer who operate with moderate levels of debt" (p. 506). Writing in 2003, Smith and Dunmore said that while this limit appeared similar to debt-to equity ratio caps in other countries, it is in fact more stringent. "While a 75% safe-harbour debt percentage appears comparable to the safe-harbour debt/equity ratios adopted in the thin capitalization rules of Canada, Japan and Germany, the New Zealand debt percentage is effectively lower because the ratios of those other countries take into account only related-party interest-bearing debt, while New Zealand's debt percentage takes into account all interest-bearing debt" (p. 506).

However New Zealand's rules also permit taxpayers to exceed the three to one ratio in certain situations. If the worldwide business has a debt-to-equity ratio that exceeds three to one, the New Zealand entity is also permitted to have a higher debt ratio. Smith and Dunmore write, "In addition, there is a provision allowing taxpayers to maintain a debt percentage above 75% without suffering a penalty under the rules if the worldwide group debt of which the New Zealand taxpayer is part also has a debt percentage above 75%" (p. 505). If a New Zealand taxpayer's debt ratio exceeds three to one, it is permitted to have a debt percentage up to 110%

of the worldwide enterprise's debt percentage. Thus the New Zealand entity can exceed the parent company's debt-to-equity ratio. The 110% rules apply to companies and trusts, but not individuals.

New Zealand's approach requires it to define how the worldwide enterprise's group debt percentage is calculated. Smith and Dunmore write, "A taxpayer's 'group debt percentage' is defined as the proportion of the total interest-bearing debt to the total assets of the taxpayer's New Zealand group for the income year. Thus, interest-free loans are excluded and are essentially treated as equity, as are accrual accounting provisions, deferred tax, and other similar liabilities or provisions" (p. 506). New Zealand's rules also allow taxpayers to exclude debt for funds lent to non-related organizations and individuals. The worldwide debt percentage is calculated annually, at the end of the firm's fiscal year.

A summary of thin capitalization/interest deduction regulations in Denmark, the Netherlands, and New Zealand follows:

TABLE II: Summary of Thin Capitalization/Interest Deduction Policies in Denmark, the Netherlands and New Zealand:

Country/ Max. 2009 Corp. Tax Rate ²⁵	2006 Pop- ulation	Rules to limit financial leverage?	Approach to limit abuse	Financial Tests	Comments
Denmark/ 25.0%	5.4M	Yes	A series of three rules that progressively limit interest deductions	1) Related party debt-to-equity ratios not to exceed 4:1 2) Interest expenses not to exceed a percent (currently 7%) of qualifying assets	<i>De minimis</i> rules apply. Rules are considered complex.

²⁵ Corporate tax rates for all G-7 countries were obtained from the OECD Tax Database <http://www.oecd.org/ctp/taxadatabase>. See Table II.1.

				3) Interest expenses not to exceed 80% of EBIT	
Netherlands/ 25.5%	16.3M	Yes	Balance sheet tests	1) Net debt-to-equity ratio not to exceed 3:1 2) Firm can opt to be limited by the worldwide enterprise's debt-to-equity ratio	Current rules implemented January 1, 2004. Firm can determine each year by which limit which limit will apply. Revisions are being discussed
New Zealand/ 30.0%	4.1M	Yes	Balance sheet tests	Taxpayer's limited by the higher of: 1) 3:1 debt to equity ratio, or 2) 110% of the worldwide enterprise's debt-to-equity ratio.	The 3:1 debt-to-equity ratio includes all interest-bearing debt. The 110% worldwide enterprise debt cap excludes the worldwide enterprise's deferred tax liabilities and other accruals.

Thin Capitalization/Interest Deduction Regulations in EU's Least Populous Countries

While all of the G-7 countries may want to limit highly leveraged financing structures, not all countries view thin capitalization as a priority. As previously mentioned, some countries view low income tax rates and more lenient tax policies as an opportunity to attract FDI. In particular, small, less economically powerful countries may want to lower taxes to entice MNEs to site operations there. Those countries may have fewer globally-successful MNEs headquartered

there, and thus low tax rates may have less impact upon government finances. They may see the potential to attract FDI through lower income tax rates and more lenient thin capitalization and/or interest deduction regulations.

Haufler and Runkel (2008) explain this by saying, “the country with the smaller population size not only chooses the lower tax rate but also the more lenient thin capitalization rule. This is because the smaller country faces the more elastic tax base for internationally mobile capital, but the same is not true for internationally immobile capital” (p. 3-4).

To illustrate this point, the thin capitalization/interest deduction limitations of the eight smallest EU members will be reviewed. These countries have been selected as information is readily available and all are in Europe. As the majority of the G-7 countries are in Europe, comparisons are relevant. While the G-7 countries have populations ranging from 33-301 million, the eight least populous European countries have populations ranging from 400 thousand to 4.2 million. With one exception, each also has a population smaller than Denmark, the Netherlands and New Zealand. Ireland’s population is 4.2 million, while New Zealand’s is 4.1 million.

A summary of the thin capitalization policies of these EU members is included in Table III. Half of these countries have no thin capitalization policies; the others rely on debt-to-equity ratios. The debt-to-equity ratios in the smaller countries are more lenient than restrictions found in the countries previously cited. In addition, the regulations in these countries also appear to be somewhat more stable than in the G-7 countries; only one of the eight countries plans to make any changes to their limit.

Cyprus, Estonia, Ireland and Malta do not currently have any thin capitalization or interest deduction rules. Latvia and Lithuania limit debt-to-equity ratios to four to one. Interest expenses for debt above this level are not tax deductible. Luxembourg and Slovenia cap debt-to-equity ratios at six to one. Slovenia plans to reduce its limitation from six to one to four to one in 2012. The four countries with thin capitalization policies have not changed their policies since they were first implemented.

Haufler and Runkel (2008) observed similar results, commenting “large countries, such as Germany, France or the United States have rather elaborate rules limiting the interest-deductibility of internal debt, whereas small countries such as Ireland, Luxembourg and many countries in Eastern Europe have either no thin capitalization rules at all, or very permissive ones” (p. 4). Given that debt-to-equity ratio ratios of 1.5 to 1 in the U.S. have been ineffective at constraining Inverted Corporations there, it is unlikely that four to one or six to one ratios will limit earning’s stripping. The study of Canadian firms found only 7.1% had debt-to-equity ratios exceeding 2:1. It is likely these smaller countries have maintained stable rules because their regulations have not discouraged FDI. As their current rules impose few restrictions on thin capitalization strategies, they have little motivation to modify their regulations. A summary follows:

TABLE III: Summary of Policies in the EU’s Eight Least Populous Countries

Country/ Max. 2009 Corp. Tax Rate ²⁶	2006 Population	Rules to limit thin Capitalization	Approach to limit abuse	Financial Test ²⁷	Changes to Law
Cyprus/ 10%	780K	No rules to restrict thin capitalization	N/A	N/A	N/A
Estonia/ 21%	1.3M	No rules to restrict thin capitalization	N/A	N/A	N/A
Ireland/ 12.5%	4.2M	No rules to restrict thin capitalization	N/A	N/A	N/A

²⁶ Corporate tax rates for Ireland and Luxembourg were obtained from the OECD Tax Database <http://www.oecd.org/ctp/taxadatabase>. See Table II.1. All others were drawn from the *International Transfer Pricing Journal*, November/December 2008, p. 352.

²⁷ All of the information on thin capitalization policies in these countries comes from a series of articles introduced Lund, H., Korsgaard, C., & Albertsen, M. *International Transfer Pricing Journal* (2008, November/December). Financing: a global survey of thin capitalization and thin capitalization rules in 35 selected countries, pp. 283-352.

Latvia/ 15%	2.3M	Yes	Balance Sheet Test	Debt to equity ratio limit is 4 to 1	No changes made since implemented
Lithuania/ 15%	3.4M	Yes	Balance Sheet Test	Debt to equity ratio limit is 4 to 1	No changes made to law since implemented 1/1/2004
Luxembourg 29.63%	470K	Yes	Balance Sheet Test	Debt to equity ratio limit is 6 to 1	No changes made to law since implementation
Malta/ 35%	400K	No	N/A	N/A	N/A
Slovenia/ 22%	2.0M	Yes	Balance Sheet Test	Debt to equity ratio limit 6 to 1	No changes made to law yet, but Debt to Equity ratio cap will drop to 4 to 1 in 2012

Ireland's population is slightly larger than New Zealand's, and it imposes no thin capitalization rules. While Haufler and Runkel have noted smaller countries tend to enact lower tax rates and more lenient thin capitalization rules, the political process and tax policies are not an exact science. There may be other considerations. Ireland's close proximity to countries imposing high income rates may have led it to conclude it could succeed at tax competition, while New Zealand's remoteness from many MNEs and large markets may have led that nation in another direction.

As Haufler and Runkel (2008) noted, countries that impose lax or no pose thin capitalization policies often have low income tax rates as well:

Table IV: Corporate Income Tax Rate Comparisons

2009 Corporate Income Tax Rate	10- 20%	20-24.99%	25-30%	31-35%	36%+
G-7 Countries	0	0	3 Italy Germany UK	2 Canada France	2 Japan USA
Other countries addressing thin capitalization	0	0	3 Denmark Netherlands New Zealand	0	0
Small EU Countries	4 Cyprus Ireland Lithuania Latvia	2 Estonia Slovenia	1 Luxembourg	1 Malta	0

Evaluation of Thin Capitalization/Interest Deduction Regulations

The G-7 countries and other nations attempting to regulate thin capitalization have a challenging task. They must balance their short-term tax revenue goals against the need to create an attractive investment environment. Countries such as Germany, France, the United Kingdom and Italy have all modified their regulations in recent years as they seek to achieve both objectives. Denmark, the Netherlands and New Zealand have crafted sophisticated rules designed to generate tax revenue and still attract FDI.

All G-7 countries began their regulatory efforts by limiting the debt-to-equity ratio of CFCs operating within their borders. This appears to be a logical approach, since it is the high debt which generates the intercompany interest expenses, shifting earnings to low-tax jurisdictions. However experience has shown that countries cannot rely exclusively upon debt-to-equity ratios

to prevent earning's stripping. There are several problems with employing debt-to-equity ratios in this context. One is the foreign neutrality tax doctrine, at least within the EU. As discussed, both the United Kingdom and Germany found its laws violated the freedom of establishment clause in the EC treaty. Both found it difficult to craft laws that were specifically designed to prevent MNEs from leveraging corporations with excessive intercompany debt, while treating domestic and internationally-owned firms equally. Each lost cases in the ECJ and has adopted a different strategy.

In addition, thin capitalization rules may not achieve their objectives. A debt-to-equity ratio does not limit absolute debt levels, and thus it may not prevent earning's stripping. If the MNE's objective is to reduce income taxes, it can determine how much debt is necessary to shift earnings from a country, inject sufficient debt and equity to comply with limitations, and transfer profits. As von Brocke and Perez (2009) wrote, "In a first stage, the majority of these thin capitalization rules established the existence of safe harbours (e.g. debt-to-equity ratio) in order to force related companies to apply normal market conditions in their intra-group transactions. However, as it was very simple for companies to circumvent the limit established by debt-to-equity ratio by increasing the equity of the financed subsidiary in a manner sufficient to push down as much debt as necessary..." (p. 29). Seida and Wempe (2004) also determined a 1.5 to 1 debt-to-equity ratio was ineffective at preventing ICs from stripping earnings from the United States. They wrote "we conclude that inverted firms' (presumed) *technical* compliance with current, rule-based impediments to earnings stripping is producing U.S. tax outcomes (liabilities) that bear very little resemblance to underlying economic events and circumstances" (p. 826, emphasis in original). In fact, the behavior they documented was so egregious they believed both the substance over form tax standard and the fairness principle were violated. They wrote, "it seems implausible that the earnings stripping behavior we document is consistent with the notion that a fair tax system must favor substance over form, and that the tax treatments of income and expense items should produce as a result that clearly reflects an entity's income" (p. 826). In short, capping the debt-to-equity ratio may conflict with both the effectiveness and fairness principles. As a result some nations, such as France and Denmark, have supplemented debt-to-equity limitations with other regulations to limit interest deductions.

Beyond this, it may also be difficult to determine one debt-to-equity ratio limit that is fair and appropriate for all businesses. Based on their risk appetite, capital needs and the vicissitudes of credit markets, businesses establish and negotiate capital structures designed to achieve their business objectives. As a result, studies of debt-to-equity ratios show they vary widely in practice. Farrar and Mawani (2008) found Canadian debt-to-equity ratios ranged from 4.2:1 to 0.15:1. The United States Department of Treasury (2007) found many debt-to-equity ratios above the 1.5 to 1 safe harbor. It stated, “Commentators have noted, however, that many U.S. corporations have debt-to-equity ratios that exceed 1.5 to 1. For example, the capital structure of multinational businesses may vary based on their lines of business and what the market will bear with respect to such a business. Consequently, some commentators have argued that the debt-to-equity safe harbor should not be eliminated but should be modified to reflect this reality” (p. 29). However determining appropriate debt-to-equity ratios for various industries is not an easy task. It may be very difficult to determine “fair” debt-to-equity limits for a range of industries.

The Department of Treasury (2007) determined “modifying the debt-to-equity safe harbor to take into account different levels of leverage supportable by different assets was too complex and that almost any generalization regarding the ability of the assets of a corporation to support debt, even within limited classes of assets, meant that at least some taxpayers would believe the test was insufficiently precise” (p. 30). While that may be correct, this argument does not support existing regulations, which specify one debt-to-equity safe harbor for all firms. And there are other regulatory approaches that could be effective. In certain situations New Zealand and the Netherlands reference the worldwide enterprise’s debt-to-equity ratio when regulating a CFC’s leverage. Denmark establishes an interest deduction limit based on a percentage of qualifying assets.²⁸ The Department of Treasury study showed no evidence it considered more effective regulatory strategies in other nations.

²⁸ As mentioned, Denmark has three limitations that successively reduce interest deductions. The second limitation applies an interest rate on qualifying assets to limit deductible interest expenses. The interest rate for 2009 was 6.5% (Bundgaard and Tell, 2010, p. 7).

In the last two years both Germany and Italy have implemented regulations directly limiting interest deductions to 30% of EBITDA. This approach has several advantages over debt-to-equity caps. First, interest deduction rules directly address the real issue that concerns tax authorities, which is lost tax revenue. The most straightforward way to retain tax revenue is through limiting tax deductible interest, not controlling the capital structure of the firm. Interest deduction limits also support compliance with the capital import neutrality standard. As discussed, Italian legislators have taken more precautions than Germans to ensure their new rules treat domestic and foreign corporations equally.

However interest deduction limitations share a problem with debt-to-equity ratios, as it is very difficult to determine one limitation that is appropriate for all businesses and industries. If a country establishes a high interest expense limit few taxpayers will contend the restriction is unfair, but the rule will not limit excessive financial leverage. Tighter regulations may limit abuse, but may also unfairly constrain other businesses that depend upon debt. Such rules may also be incompatible with the arm's length standard. A single figure regulating all businesses is arbitrary and may be too restrictive for some firms, and too lax for others. When debt-to-equity ratios vary widely in practice, "one size fits all" limitations may fail to satisfy both the fairness principle and the effectiveness principle.

The U.K. is the only country today that relies exclusively upon the arm's length standard. This approach fails to satisfy the certainty principle. Unlike any other major country analyzed, the U.K. gives taxpayers no quantitative guidance to determine how much debt or interest expense might be considered excessive. Furthermore, the CFC has to determine its debt capacity as a stand-alone business, ignoring its function within the larger enterprise. This is inherently difficult. These ambiguities can also make administration of these rules inefficient, as regulators and tax authorities litigate their differences.

Beyond this, the U.K.'s approach may be too lenient. As van Saparoea (2009) writes, "The arms-length debt capacity of a UK business is defined as the level of indebtedness the UK business could have handled from an independent lender, without considering any larger enterprise to which the firm may belong" (p. 6). By focusing on what a subsidiary "could have borrowed," the UK's approach may permit excessive leverage. In practice, many firms borrow substantially less than they could. The U.K. approach encourages CFCs to define their maximum borrowing capacity, though the MNE may have no intention of assuming such leverage.

Proposal: Limit Interest Expenses to the WW Enterprise's Interest Expense Ratio

Nations have attempted a variety of regulatory strategies to control highly leveraged financing structures. Based upon this paper's analysis of such tax regulations, several conclusions can be reached concerning the most effective ways to control this activity.

One conclusion is that debt-to-equity limits are not always effective at preventing firms from stripping earnings from one country to another. If the MNE has sufficient capital, it can inject debt and equity into the CFC, comply with debt-to-equity limits, and still strip earnings from one country to another. MNEs have been able to work around these restrictions, as several studies have shown. The comparatively strict U.S. 1.5 to 1 debt-to-equity ratio was completely ineffective at preventing Inverted Corporations from shifting earnings abroad. It is very easy to inject both debt and equity into a subsidiary, comply with regulatory restrictions, and strip earnings. For this reason several countries, such as Germany and Italy, have adopted interest deduction limitations, and this is a more effective approach.

Second, it is inherently difficult to identify one debt-to-equity ratio, or one interest deduction limitation, that is fair and appropriate for all businesses. As mentioned, a Canadian study found trade debt-to-equity ratios there ranged from 4.2 to 1 to 0.15 to 1. Thus some firms were leveraged with twenty-eight times the debt ratio as other businesses. In addition, the U.S.

Department of Treasury (2007) considered establishing different debt-to-equity limits for various industries, but determined this was too difficult to accomplish with any precision. So it continues to limit all firms with one debt-to-equity ratio, which is an unfair and inefficient regulation, disconnected from market place realities.

Several countries have implemented rules that link a firm's capital structure to the worldwide enterprise's debt-to-equity ratio, or to that of similar firms in the same industry. The third escape clause in Germany's current interest deduction rule exempts firms that are no more leveraged than the consolidated firm. Japanese thin capitalization rules allow firms to use the debt-to-equity ratio of a similar Japanese firm to determine their maximum debt-to-equity ratio. The Netherlands' rules limit a subsidiary's debt-to-equity ratio to that of the worldwide enterprise. New Zealand's rules limit a subsidiary's debt-to-equity ratio to 110% of the consolidated business. Thus several countries impose thin capitalization rules that reference the debt level of the worldwide enterprise, or similar firms in like industries.

Rules in these countries demonstrate that limiting a firm's financing structure by referencing the worldwide enterprise's financial metrics, or that of a comparable firm, is a legitimate regulatory approach. However, it should be noted that in all of these cases countries were using market-based measures as a backup strategy, in the event the primary rules were too stringent. If the country's primary limits were too restrictive, they provided firms an alternative to demonstrate their leverage was similar to the worldwide enterprise's, and thus not a tax-motivated strategy.

This paper proposes that the best approach to controlling excessively leveraged funding strategies is to limit a CFC's tax deductible interest expenses to the worldwide enterprise's ratio of interest expense to earnings. This should be the primary strategy to combat excessively leveraged financing structures. While it makes sense to establish market-based financial measures to control financial leverage, debt-to-equity limitations are not always effective. As Germany, Italy and the United States currently reference EBITDA (or a close approximation) to

limit tax deductible interest expenses, it makes sense to continue to use that earnings measure. The following table demonstrates how the worldwide enterprise's ratio of interest expense can be used to determine the maximum tax deductible expense for a subsidiary:

Table V: Proposal to Limit a CFC's tax deductible interest expense by the worldwide enterprise's ratio of interest expense to EBITDA

Financial Measures	WW Enterprise Financial Results	Financial Measures	CFC Financial Results/Limit
Total Trade Interest Expense	\$15,000,000	Limit of Tax Deductible Interest Expense to EBITDA	7.5%
WW EBITDA	\$200,000,000	CFC EBITDA	\$10,000,000
WW Ratio of Trade Interest Expense to EBITDA	7.5%	Tax Deductible Limit for Trade/Intercompany Interest Expenses	\$750,000

In the above example, the worldwide enterprise reported \$15,000,000 in trade interest expenses, and EBITDA totaled \$200,000,000. Thus its ratio of interest expense to EBITDA is 7.5%. This establishes the subsidiary's tax deductible limit. The subsidiary earned \$10,000,000. The CFC's tax deductible interest expense limit is determined by multiplying the 7.5% figure times its EBITDA of \$10,000,000, which is \$750,000. Interest expenses up to that figure are tax deductible. Interest expenses above that figure are disallowed, and perhaps carried forward into a future tax year.

This proposal supports the certainty principle. Calculating the worldwide enterprise's ratio of interest expense to earnings is a straightforward task, and it provides taxpayers and regulators with a clear, unambiguous rule. It provides much more certainty than the U.K.'s approach, which relies on the vagaries of the arm's-length standard. It also provides more certainty than

safe harbors. These upper limits offer certainty for taxpayers operating below the safe harbor limit. But leveraged taxpayers may exceed the safe harbor boundary as part of their normal business activities, not as a tax minimization strategy. They have no assurance their financing structure will not be challenged by tax authorities.

Many international tax issues are filled with uncertainty, so establishing clear rules for all parties benefits both MNEs and governments. As Smith and Dunmore (2003) wrote, “In the case of thin capitalization, it is likely that arm’s length debt/equity ratios of comparable enterprise’s will be easier to obtain than appropriate CUPs for transfer pricing investigations, given that debt/equity ratios can be simply calculated from companies’ financial statements” (p. 504). However this proposal creates even more certainty, as the MNE would use its own financial results to establish limits, rather than search for comparable firms.

Because this proposal provides taxpayers and tax authorities with certainty, it also supports the efficiency principle. Both the taxpayer and tax authorities can quickly determine their limits by reviewing the worldwide enterprise’s income statement. In contrast, complying with France’s or Denmark’s complicated rules can be difficult, expensive and time-consuming. The U.K. rules encourage taxpayers to determine their arm’s-length borrowing capacity, viewed as a stand-alone enterprise, which can also be a costly and lengthy process.

Not only does this approach support efficient tax collection, it supports market efficiency. As Musgrave and Musgrave (1976) wrote: “Taxes should be chosen so as to minimize interference with economic decisions in otherwise efficient markets” (p. 210). Tax rules that establish “one size fits all” debt limitations do not support market efficiency, as they may encourage tax-motivated decisions. Interest limitations that are consistent with the worldwide enterprise’s funding decisions support market efficiency. The motivations of the MNE and its subsidiaries become aligned. The CFC’s limit is established by the WW enterprise’s own financing

decisions. Subsidiaries in countries imposing high income taxes would lose their incentive to incur excessive intercompany debt.

While “fairness” is difficult to define, in some ways this proposal appears to be fairer than the “one size fits all” rules adopted by many countries. Tax authorities would not create limitations inconsistent with firm’s own funding strategy. In fact, tax authorities would not be regulating an appropriate capital structure for the CFC. The business would be establishing its own financial limit, through its own funding decisions. In contrast to uniform regulations, it sets a fair and appropriate interest expense limit for each firm, neither too strict nor too lenient. In certain cases a subsidiary may be engaged in a fundamentally different line of work than the worldwide enterprise. In those cases fairness would dictate establishing an interest expense limit consistent with other firms in that industry, as Japanese rules permit today.

Finally, this proposal improves effectiveness. As demonstrated previously, current debt-to-equity limitations are often ineffective at halting abuse. Interest deduction limits are more effective, but they only establish an upper limit for tax deductible interest expenses. As long as the MNE is careful not to exceed the regulatory maximum, it is free to pursue tax-driven financing decisions. For example, suppose a MNE consciously chose to keep debt and interest expenses low. Today it is permitted to increase deductible interest expenses to 30% of EBITDA in Germany and Italy. These countries may be depriving themselves of tax revenue because they permit MNEs to structure intercompany loans for the sole purpose of stripping earnings to the law’s limit. This proposal would establish a fair and reasonable limit for each company by basing it on the worldwide enterprise’s own funding decisions.

To evaluate this proposal’s effectiveness, we should also ask if there are ways MNEs could work around these rules to achieve tax-advantaged results. It is true MNEs that incur higher trade interest expenses can allow their CFCs to deduct more intercompany interest under this proposal. So it is possible MNEs could increase trade interest expenses, and this would allow them to

leverage certain subsidiaries more intercompany debt, and thus more earnings could be stripped from high-tax to low-tax jurisdictions. However to do this, the MNE would be reducing its pre-tax earnings by increasing additional trade debt expenses, which would moderate such actions. In addition, banks and other lenders will not want to extend more debt than a firm can be expected to repay. Lenders are also more likely to demand loan collateral or covenants that can place limits on a firm's freedom to conduct its business operations. So there are several forces that constrain such a tax strategy. In addition, these are marketplace forces that may act to limit a firm's debt. Market forces that constrain debt can frequently be more effective than tax rules, which can sometimes be evaded or become dated.

Conclusion

The U.S. federal government is facing some of the largest budget deficits in its entire history. The Congressional Budget Office has said the projected budget deficits are unsustainable, and that the federal government needs to close the budget gap through reduced spending and/or increased revenue. One way

the U.S. government could increase tax revenue is through tightening its thin capitalization/interest deduction rules. Experience has demonstrated that existing U.S. thin capitalization rules can be avoided. U.S. tax authorities should be concerned with thin capitalization/interest deduction rules, as the U.S. income tax rate is one of the highest in the world, and thus the country is an attractive target for earning's stripping activities. In addition, the U.S. has left its thin capitalization/interest deduction rules essentially unchanged since 1989, while many other countries have been regularly reviewing and modifying these rules to ensure they strike the right balance between raising tax revenue and attracting FDI.

This paper has reviewed a number of regulatory approaches to control excessively leveraged financing structures, and proposes that the worldwide enterprise's ratio of interest expense to EBITDA should determine a subsidiary's tax deductible interest expense limit. This approach achieves many of the objectives that define a high quality tax law by supporting the certainty

principle, the efficiency principle, the fairness principle, capital import neutrality, and the effectiveness principle. As tax authorities in the United States look for ways in which to increase tax revenue, they should consider this proposal. Other countries may want to consider this regulatory approach as well, as they seek to control excessively leveraged financing structures of firms operating within their borders.

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The Tax Efficient Supply Chain: Considerations for Multinationals

Abstract

Companies throughout the world are restructuring their supply chains to reduce costs and improve efficiency. As they do this, activities are frequently being transferred to countries imposing lower income tax rates. Recent evidence indicates some firms are linking supply chain decisions with income tax planning, to construct a tax efficient supply chain that aims to maximize net income. While other papers have discussed various elements of a tax efficient supply chain, this paper specifically focuses on the income tax considerations a firm should consider when constructing a tax efficient supply chain. In particular, the tax model of the Multi-National Enterprise (MNE) is analyzed to determine the best opportunities for optimizing net income. The various legal entities a MNE forms to conduct business, including sales companies, distribution centers, manufacturing companies, procurement organizations and shared service providers are analyzed to identify key factors the MNE should consider when restructuring its supply chain. The paper also proposes ways firms can support their position when tax authorities audit their supply chain restructurings.

Introduction

Multinational Enterprises (MNEs) are restructuring supply chains to reduce their cost structures. As trade barriers fall and communications technologies improve, it has become easier and more cost effective to manage business operations across international borders. This has motivated businesses to centralize, reorganize and relocate many business processes to perform them in the most efficient manner. While they do this, many businesses are shifting business activities from high-tax to low-tax jurisdictions. This trend has not escaped tax authorities in high-tax jurisdictions, who are concerned with the lost tax revenue.

Schwarz and Castro (2006) write, “The globalization of markets and products and the development of technology have created an impetus for specialization within multinational groups. The co-existence of low-cost and high-cost jurisdictions drives cost reduction strategies, including transportation costs as well as those associated with labor-intensive activities.” They write, “Whether motivated by commercial or tax reasons, some countries have observed a reduction in tax revenues when modern business models are adopted compared with more traditional models” (p. 187). They noted that tax practitioners from France, South Africa, Switzerland, Mexico, Argentina and the United States have all observed this trend. Companies are restructuring their supply chains and simultaneously reducing their income tax obligations.

This paper demonstrates that MNEs should link income tax and supply chain considerations when restructuring their supply chains, and they should aim to maximize net income when doing so. This recommendation differs from the great majority of supply chain papers, which have generally recommended businesses should seek to minimize pre-tax costs. One of the most important activities for both supply chain and tax organizations is determining where to locate business operations, so these organizations should collaborate to make optimal decisions. This paper explains how linking supply chain and income tax analysis can lead to better decisions and improve net income. It contributes to knowledge of this process by evaluating the MNE’s international tax model and specifically evaluating a variety of legal organizations within the

MNE to determine the best opportunities for integrated supply chain and income tax planning. This paper also identifies a number of tax issues firms need to consider when making these important decisions.

Literature Review

For the most part, supply chain literature and tax articles have been strictly separated, and little literature has attempted to link the supply chain with tax considerations. Experts in these activities have traditionally focused either on the supply chain or income taxes, and have published their work in their respective journals. But recently there have been some articles that have demonstrated these activities are becoming increasingly linked.

From a supply chain perspective, Beamon (1998) reviewed supply chain literature to identify the best measures of supply chain performance. One of Beamon's conclusions was that firms were frequently encouraged to reduce pre-tax costs, not maximize net income. Skjett-Larsen, Schary, Mikkola and Kotzab (2006) identified six measures of supply chain success, and only one measure employed net income. Most of the recommended measures of supply chain success have not included income taxes, presumably because they are outside a supply chain manager's control.

Cohen and Mallik (1997) explicitly recognized that supply chain restructurings did create opportunities to reduce taxes simultaneously. However they acknowledged at that time that integrating supply chain and tax decisions was a relatively new concept, stating: "Analytical modeling in this field, however, is relatively new" (p. 201).

Irving, Kilponen, Marakaian and Klitgaard (2005) suggested supply chain management decisions should include tax considerations. They proposed that including tax considerations into supply chain decisions could improve net income for many large enterprises. They made the business

case for linking supply chain and tax decisions, and provided several examples in which such an approach could improve an organization's net income.

Schwarz and Castro (2006) summarized a discussion held to discuss the tax impact of supply chain restructurings at a tax conference in 2005. Their article demonstrated that supply chain restructurings were eroding the tax base in many high-tax countries. They showed that supply chain restructurings were creating many new issues for tax authorities and businesses, not all of which could be immediately answered. One key concern was how supply chain restructurings were changing the risks and responsibilities of subsidiaries, and whether these changes merited transfer pricing changes. These discussions led the OECD to form a working group to study the issues further (p. 187).

The *International Transfer Pricing Journal* recently featured six articles focusing upon the tax consequences of supply chain restructurings.²⁹ Authors representing Belgium, France, the Netherlands, Spain, the United Kingdom and the United States each discussed developments in their country. Tax authorities in these high income-tax countries are concerned that supply chain restructurings are reducing their tax revenue. The articles emphasized recent developments in those countries, and what actions tax authorities were contemplating or taking to preserve their tax base. These articles again demonstrated that supply chain restructurings were becoming an important tax issue, and that the topics are becoming linked.

Romalis (2007) analyzed the impact of low income taxes and falling trade costs upon Ireland's economy. He argued that while low income taxes were important, they were not the only factor that contributed to the growth of the Irish economy in the 1990's. He noted that the reduction in income tax rates did not immediately trigger an increase in investments and exports there. He argued "that an important trigger for the rapid growth of international trade and FDI has been a

²⁹ See *International Transfer Pricing Journal*, Comparative Survey: Supply Chain Management, Number 4, July/August 2006

decline in technological and policy barriers to international trade in the 1990s” (p. 460). Romalis argued that Ireland’s economic growth was “explained by an interaction of low taxation of capital and declining international trade costs” (p. 468). Romalis’s paper provides further support for the position that income taxes and supply chain costs can work together to stimulate investment in countries in low-tax countries.

Anderson, Murphy and Reeve (2002) also focused upon the importance taxes play upon supply chain decisions. Their focus was specifically upon state income, franchise, employment and property taxes within the United States. Lewis (2009) also focused on the impact of supply chain decisions upon taxes, but specifically addressed Value Added Tax (VAT) issues, where such taxes are imposed. Both articles again provided support for the position that tax and supply chain decisions are merging, but they did not address national income tax issues, which is the focus of this paper.

Income Tax Efficient Supply Chain Planning

Income tax rates vary substantially from country to country. While corporate profits are taxed at nearly 40% in high-tax countries, such as Japan,³⁰ income tax rates are as low as 2% in other jurisdictions, such as Puerto Rico.³¹ Low tax jurisdictions are commonly called tax havens. Such countries typically assess low or no income taxes to attract investment from MNEs, generating local jobs. MNEs can substantially reduce income taxes by moving business operations to tax havens.

Transferring operations abroad can frequently draw scrutiny from tax authorities, as these business decisions can reduce government tax revenue. Therefore firms must be careful to comply with local and international tax laws. While tax laws differ from one country another,

³⁰ OECD Tax Database, 2006; see <http://www.oecd.org/ctp/taxdatabase>; see Table II.1, Combined Corporate Income Tax Rate, 2006

³¹ 13 L.P.R.A. § 10101, Puerto Rico Tax Laws

most international tax laws do not discourage firms from pursuing legal means to minimize taxes. The US perspective may be summarized by several well-known statements of the late US Supreme Court Justice Learned Hand. Judge Hand wrote: “Over and over again courts have said there is nothing sinister in so arranging one’s affairs to keep taxes as low as possible. Everybody does so, rich and poor; and all do right, for nobody owes any public duty to pay more than the law allows: taxes are enforced extractions, not voluntary contributions. To demand more in the name of morals is mere cant.”³² In another opinion Judge Hand wrote: “Any one may so arrange his affairs that his taxes shall be as low as possible; he is not bound to choose that pattern which will best pay the Treasury; there is not even a patriotic duty to increase one’s taxes...”³³

As income taxes are often one of a firm’s largest costs, firms engage in tax planning to minimize this expense. Tax planning is the use of legal means to arrange business activities to minimize tax obligations. International tax laws do not prevent MNEs from organizing their operations to reduce taxes, but firms must be careful to use only legal strategies to reduce tax obligations. MNEs must comply with international tax laws, and not cross the line that distinguishes tax minimization from tax evasion. Tax evasion is generally defined as taking illegal action to reduce tax obligations. Tax evasion penalties differ from country to country, but in some nations they can be substantial, and provide strong incentive to comply with tax laws. For example, in the United States 40% transfer pricing penalties can be added to the tax assessment, along with additional interest charges.³⁴

Tax laws are frequently considered complex, and international tax laws are even more so, as they frequently differ between countries. However there are certain common principles to which firms must adhere. Two important international tax standards are the arm’s-length standard and the business purpose doctrine.

³² *Commissioner v. Newman*, 47-1 USTC ¶9175, 35 AFTR 857, 159 F.2d 848 (CA-2, 1947)

³³ *Gregory v. Helvering*, 69 F.2d 809, 810-811 (2d Cir. 1934)

³⁴ IRC §6662

The arm's-length standard governs how related parties value product sales and services between entities. When a MNE operates in more than one country, it typically creates a new legal entity to facilitate legal operations in that jurisdiction. Often that entity needs to buy or sell products from other legal entities within the same worldwide enterprise. US Treasury Regulations state "In determining the true taxable income of a controlled taxpayer, the standard to be applied in every case is that of a taxpayer dealing at arm's length with an uncontrolled taxpayer."³⁵ The arm's-length standard is supported in many other countries, and is cited as the key principle in the OECD's Transfer Pricing Guidelines for Multi-National Enterprises and Tax Administrations.³⁶

The business purpose doctrine says a business transaction should have some purpose other than tax reduction. Jones (2006) states "a transaction should not be effective for tax purposes unless it has a genuine business purpose other than tax avoidance. The lack of any business purpose by the participants can render a transaction meaningless, at least from the perspective of the IRS, even if the transaction literally complies with the law" (p. 85). This places limitations on Judge Hand's statements. Judge Hand said tax reduction is a legitimate objective, but the business purpose doctrine says tax reduction cannot be the sole purpose. For this reason, tax practitioners frequently emphasize the operational benefits of restructurings that also reduce tax liabilities. They can argue to tax authorities that a restructuring was done for primarily to achieve operational goals, and that tax reductions were a byproduct of restructurings conducted to achieve other business objectives.

Selecting a business location involves many considerations, so MNEs can generally find a legitimate business purpose for transferring operations elsewhere. Business objectives might include proximity to customers, risk diversification, low wage rates, or easy access to materials suppliers. However not all businesses transfer operations to low tax countries, as there are other considerations. There are many factors firms evaluate when determining where to locate

³⁵ Treasury Regulation §1.482(1)(b)(1)

³⁶ Transfer Pricing Guidelines for Multi-National Enterprises and Tax Administrations, (June, 2001). OECD Publishing, 254 pages.

operations, such as employee skills and availability, political stability, and an adequate local infrastructure, among other factors. Supply chain costs are an important consideration. Companies seeking to maximize profits need to balance income tax savings against these other factors. Income taxes may be reduced by operating in a low-tax jurisdiction, but transferring operations to another location will impact supply chain costs. A firm will ideally identify an alternative that will reduce both income taxes and supply chain costs. But in many cases it may not be possible to minimize both income taxes and supply chain costs. One alternative might reduce income taxes, but simultaneously increase supply chain costs. Another might reduce supply chain costs but at the same time increase income taxes. Since income tax and supply chain costs may simultaneously change when business activities are moved from one country to another, they should be analyzed jointly.

The Income Tax Efficient Supply Chain

International tax and supply chain planning are frequently viewed as unrelated activities. Supply chain managers and tax directors have different proficiencies and their reporting relationships differ. Supply chain management is a line activity, the department generally reports to manufacturing or operations managers, and it is staffed by supply chain and manufacturing analysts. In contrast, tax is a staff activity, the department typically reports to the Chief Financial Officer, and tax departments employ tax attorneys and tax accountants. As a result, these departments may not collaborate, at least historically. Thus supply chain and income tax decisions were often made by different organizations operating independently.

In addition, tax and supply chain organizations often attempt to achieve different objectives. Beamon (1998) showed that the most popular performance metric for supply chain managers is pre-tax cost minimization (p. 289). In contrast, tax departments seek to maximize net income, while complying with tax laws. Differing objectives also discourage collaboration.

Despite this separation, one of the most important activities for both supply chain organizations and tax departments is recommending where to locate business processes. Supply chain departments determine where to procure materials, manufacture products, and distribute finished goods. These location decisions can have a substantial impact on income tax obligations, as tax rates vary substantially from country to country. The evidence suggests that in many cases these impacts were analyzed independently, but in recent years it has become more common to link supply chain and income tax planning.

This is because decisions made to reduce income taxes can also have a major impact upon supply chain costs. If a MNE decides to manufacture or distribute goods in one country for tax purposes, it will have an impact upon supply chain costs, including duties, tariffs and distribution costs. For this reason, supply chain organizations and tax departments should collaborate to achieve a common goal of maximizing net income. When supply chain organizations aim to minimize pre-tax supply chain costs, they ignore income tax impact. Tax departments limit their potential to increase net income when they do not contribute to supply chain decisions. It appears this has become clearer to many firms in recent years, and that many are beginning to link these activities.

Describing the situation in the United States, Wright (2006) comments: “Supply chain management structures are increasingly used by multinational enterprises (MNEs)” (p. 202). Wright says “Such business activities give rise to transfer pricing opportunities that, many times, result in a reduction of taxable income in high-tax jurisdictions. The tax authorities in high-tax jurisdictions have, as a result of the changes in taxable income in their jurisdictions, become very interested in auditing these structures” (p. 202).

Tax authorities in France are also concerned about lost tax revenue. According to Douvier (2006), “For a number of years, supply chain management (SCM) structures have been implemented in Europe in order to respond to the demand of clients, to reduce costs and to allow

efficiency to the benefit of both the clients and the companies themselves. Additionally, the implementation of such structures may permit tax reductions” (p. 178).

Tax authorities in the Netherlands believe this is one of their most important issues. Kuppens and Oosterhoff (2006) write, “Cross-border restructuring of multinational enterprises (MNEs) is an issue that is high on the agenda of the Dutch tax authorities. In fact, the trend towards outsourcing; transferring production and other activities to countries with low labor costs; and moving leadership and risk-taking functions to low-tax countries are all elements that may trigger loss of employment and a reduction of the taxable base in the Netherlands. The relevant tax aspects of such changes are closely monitored by the tax authorities” (p. 183).

Some authors argue supply chain restructurings are driven primarily by operational objectives, rather than tax considerations. Casley, Pope and Hohtoulas (2006) focused upon developments in the United Kingdom. They write, “The impact of the supply chain model on tax is probably not always at the forefront of the managers’ minds” (p. 194). However they acknowledge tax considerations are equally important. They write, “Whether the decisions made increase or decrease the MNE’s effective tax rate is often a secondary consideration, but no less important” (p. 194). Whether motivated primarily or secondarily by tax considerations, some MNEs are simultaneously restructuring their supply chain and reducing their income tax obligations.

Romalis (2007) took a very different approach from the other articles cited. Romalis focused specifically on the growth of Ireland’s economy in the 1990’s, and tried to determine what triggered its rapid economic growth. Romalis writes that “an economy that is characterized by low taxation of capital (and that has no other flaws that implicitly tax capital) becomes an ideal location for export-based capital intensive industries when trade costs are low” (p. 460). Citing reductions in worldwide duties, EU tariffs, the Single Market Program, and technological improvements that reduced trade costs, Romalis argued that reduction in trade costs have contributed significantly to Ireland’s growth in export-oriented trade (p. 460). “Different rates of

capital taxation, when combined with different capital intensities in production, are a powerful force generating international trade. The model can be used to analyze the effects of declining trade costs on a small economy that levies low taxes on capital. Its international trade begins to expand greatly” (p. 461). Romalis showed that much of Ireland’s growth is in export-oriented, capital intensive manufacturing industries.

Romalis argued that low income tax rates were not solely responsible for the growth of the Irish economy. He writes, “Because the Irish tax rate on foreign capital has been low for decades it alone cannot explain why the most impressive growth performance occurred in the mid- to late 1990s. This was a period where measured international trade costs for so many goods and services became very small” (p. 465-466). Romalis notes that a variety of trade policy and technology improvements contributed to Ireland’s growth. These include worldwide reductions in tariffs, the Single Market Program, and improved computer and communications technologies that made it easier to manage business processes cost-effectively across international borders. However Romalis’s observations were not limited to Ireland. Romalis writes, “The tax advantage is enough to attract capital from large countries, and as a result per-capita GDP in small countries rises. But large trade costs still result in large countries preserving most of their capital intensive-industries. As trade costs fall the advantage of locating in large markets diminishes, so the location of capital is mostly driven by favorable taxation” (p. 464).

Romalis’s conclusions have been supported by several studies that have focused upon the Puerto Rico economy. In particular, they have sought to explain the growth of the pharmaceutical industry there. Bram, Martinez and Steindel (2008) argued that the growth of that industry in Puerto Rico was the result of both low tax rates, enacted in section 936 of the US tax code, and low supply chain costs. Referring to the low tax rates they write “In practice, the provision appeared to encourage siting in Puerto Rico of plants producing high-profit, easily transportable items such as pharmaceuticals and electronic components” (p. 3). Scherer (1997) reached the same conclusion, writing “Because drug manufacturing and transportation costs are modest in relation to product prices and because the geographic locus of patent rights ownership is easily

transferred, the pharmaceutical companies have been particularly aggressive in obtaining U.S. federal income tax credits by locating their production operations in Puerto Rico” (p. 107). To summarize, low tax rates become particularly attractive when products are very profitable and the tax savings are not offset by high distribution and other supply chain costs.

Restructuring the Supply Chain

According to Beamon (1998), the supply chain is an integrated process in which a number of business entities, including materials suppliers, manufacturers, distributors and retailers work together to acquire raw materials, convert materials into finished goods, and deliver products to customers (p. 281). Skjett-Larsen, Schary, Mikkola and Kotzab (2006) write, “It is propelled by the realization that no organization can be good at all things, and by the expanding reach and ease of access to information and communication technology” (p. 17). In recent years optimizing the supply chain has received considerable attention in business and academia, driven by the desire to reduce cost structures, improve customer satisfaction and increase operating efficiency.

The supply chain includes two sub-processes. The first, production planning and inventory control, includes manufacturing and inventory storage policies. The second, distribution and logistics, delivers finished goods to customers. Distribution costs include can include shipping costs, tariffs, and all other costs related to delivering finished goods to customers. An overview follows:

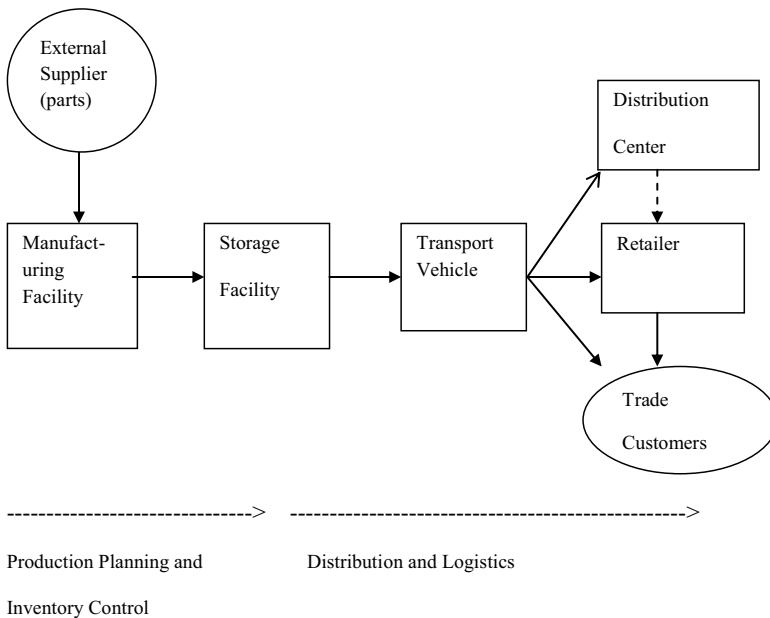


Figure 1: The Supply Chain Process

As mentioned, MNEs are changing the way they manage the supply chain. Reduced barriers to trade, agreements to reduce tariffs and duties, outsourcing alternatives and increased focus on core competencies have all generated interest in supply chain management. Reducing trade barriers has driven trade costs down, and lower trade costs have enabled companies to locate business operations where they can be performed most efficiently. Kuppens and Oosterhoff (2006) write: “The competitive environment in a global economy has accelerated change among MNEs. Companies are increasingly focused on product specialization and optimization of their entire value chain. Business restructuring is often geared towards centralizing key functions and decision making, and this is enabled by more transparency and availability of data through information technology. Such changes typically entail a transfer of functions and risks from a local-country level to one central location” (p. 183). Improved communications technologies have also enabled supply chain process improvements. According to Verlinden and Costermans, (2006) “The transaction costs are further nose-diving due to cheaper telecommunications and the

emergence of the Internet” (p. 173). Cost-effective communications technologies, such as the Internet and Enterprise Resource Planning (ERP) information systems, make it easier to manage business processes across international boundaries. Both enable rapid and cost-effective information flows across national borders, enabling centralized management and removing redundant processes.

Cohen and Mallik (1997) write there has been “a movement away from the classic multinational style of operating relatively autonomous domestic firms in each country of operation. The global supply chain is characterized by the linkage of decision making at all levels of the firm’s supply chain, i.e., across regional, functional and even interfirm boundaries” (p. 193). For example, IBM’s CEO recently told *The Economist* (April 7, 2007) IBM is dramatically altering the roles and responsibilities of its subsidiaries:

“Sam Palmisano, IBM’s boss, foresees nothing less than the redesign of the multinational company. In his scheme, multinationals began when 19th-century firms set up sales offices abroad for goods shipped from factories at home. Firms later created smaller ‘Mini Me’ versions of the parent company across the world. Now Mr. Palmisano wants to piece together worldwide operations, putting together different activities wherever they are done best, paying no heed to arbitrary geographic boundaries. That is why, for example, IBM now has over 50,000 employees in India, and ambitious plans for further expansion there. Even as India has become the company’s second-biggest operation outside America, it has moved the head of procurement from New York to Shenzhen in China” (p. 11).

In short, supply chain management has become a key business process. Corporations are centralizing business processes to perform activities where they can be done most efficiently, frequently ignoring national boundaries. Improved information systems, trade agreements and tariff reductions have reduced trade costs and enabled supply chain restructurings. Casley, Pope and Hohtoulas (2006) write, “When geographic markets were more distinct, transport was more expensive, communication harder and information less widespread, supply chains were easier to

understand and national businesses within an MNE more likely to operate on a stand-alone basis. This is no longer true; reductions in trade barriers coupled with the increasing need to capture increased value or greater cost effectiveness, has caused many MNEs to rethink their supply chains to cater for these changes in the global economy” (p. 194).

At the same time, tax issues permeate supply chain decisions. Supply chain decisions determine in what location a business operates, which determines both the types of taxes levied, and the tax rates. These operational decisions can also change the roles and responsibilities of a subsidiary, which may also have transfer pricing implications. Supply chain decisions can impact income taxes, property taxes, value-added taxes, and sales taxes. While this paper’s focus is directed towards income taxes, these other taxes can also be important considerations and should not be ignored.

Measuring the Supply Chain

An effective supply chain must achieve many objectives. To satisfy customers, the supply chain must deliver products to customers where and when they want them. Minimizing inventory levels and obsolescence are important operating efficiency objectives. Firms also want to minimize supply chain risks, such as unreliable suppliers and operating in unstable locations. And cost containment is generally a key business objective. Effective supply chains must balance these goals, improve profits, and ultimately add shareholder value.

Beamon (1998) surveyed significant supply chain management literature (p. 281-294).

Beamon’s article reviewed 29 supply chain management articles, and identified ten supply chain performance measures, shown below:

<u>Objective</u>	<u>Performance Measure</u>	<u># Articles</u>
Financial Goals	Minimize Cost	13
	Maximize Net Profit	1
Inventory Management	Minimize Average Inventory	2
	Minimize Obsolete Inventory	1
Customer Satisfaction	Minimize product demand variance	4
	Maximize on time delivery	3
	Minimize stockout probability	2
	Maximize available system capacity	1
Multiple Goals	Maximize buyer-supplier benefits	1
	Minimize activity days and total cost	1
Total		29

Only one of the 29 articles recommended supply chain managers should aim to maximize net income. Similarly, Skjett-Larsen, Schary, Mikkola and Kotzab (2006) identified six frameworks to evaluate the supply chain (p. 322). Four emphasize cost management, and two stress business process success. Only one of the six measures, Return on Assets, employs net income, which is impacted by income taxes. And while that measure uses net income to measure supply chain efficiency, their work does not discuss the trade-offs that may exist between income tax and supply chain objectives, or explain how focusing on net income can change traditional supply chain management.

However net income is a primary driver of shareholder value. In recent years many have debated whether net income or cash flow is a better measure of shareholder value. But proponents of both measures agree the figures should be calculated net of income taxes. A study by Bartov, Goldberg and Kim (2001) analyzed the value of net income versus free cash flow in a number of countries, with different financial reporting rules. They believed prior studies had

demonstrated that in the United States “the explanatory power of earnings is superior to cash flows” (p. 108). They attempted to determine if this result could be extended to other countries. Bartov, Goldberg and Kim concluded “Our findings provide support for earnings having greater relative explanatory power over cash flows in the Anglo-Saxon countries, but not in Germany and Japan” (p. 129). In the latter countries net income was not necessarily superior to cash flow; cash flow was determined to be equally good in many situations. Given that net income is considered the best measure of firm performance in many countries, and of equivalent value with free cash flow in other countries, this paper will emphasize measuring and improving net income.

The other supply chain measures proposed generally support maximizing net income. These metrics focus on activities controllable by supply chain managers and are justifiable when they contribute to profit maximization. At first glance, all of these measures appear to support maximizing net income. But in some instances the most popular metric, pre-tax cost minimization, may actually conflict with net income maximization. And cost minimization, while an important business metric, is not the most important driver of shareholder value.

Cost Minimization and Profit Maximization

To illustrate this, consider the following example. A supply chain manager must decide between two manufacturing locations. The first option minimizes supply chain costs, and is closer to suppliers and customers. The second location is further from suppliers and customers, and wages are higher. Per unit manufacturing costs are shown below:

Cost per unit	Option One: Lower Supply Chain Costs	Option Two: HigherSupply Chain Costs
Inbound Logistics	\$2	\$4
Materials	\$30	\$30
Labor	\$10	\$20
Shipping/Outbound Logistics	\$2	\$4
Total Supply Chain Costs	\$44	\$58

Table 1: Supply Chain Costs

If a supply chain manager’s goal is to minimize supply chain costs the first option is superior. Inbound logistics, wages and outbound logistics costs are lower. But reducing supply chain cost does not necessarily maximize net income. The income tax impact may outweigh supply chain savings. If income taxes are considered, the second option may be superior. Suppose a transfer price of \$200 from both locations, and a lower income tax rate in the second location.

	Option One: Lower Supply Chain Costs	Option Two: Higher Supply Chain Costs	Difference (1-2)
Transfer Price	\$200	\$200	--
Total Supply Chain Costs	\$44	\$58	(\$14)
Operating Profit	\$156	\$142	\$14
Tax Rate	35%	25%	10%
Taxes	\$54.60	\$35.50	\$19.10
Net Profit	\$101.40	\$106.50	(\$5.10)

Table 2: Net Profit Comparison

While option one minimizes supply chain costs, option two maximizes net income.

This is not merely a theoretical concern; it has very practical consequences. Businesses regularly reshape their supply chains, looking for ways to reduce their cost structure, and improve inventory management and customer satisfaction. MNEs now regularly transfer business operations from one country to another. Supply chain decisions that ignore tax impact may actually reduce net income and shareholder value. Businesses should consider tax consequences to make optimal supply chain decisions, and the evidence indicates many have begun to do so. Tax authorities in a variety of countries have observed this activity and are concerned with the implications on their revenue.

The previous example assumes the same \$200 transfer price from either location. IRS §482 regulations identify five acceptable transfer pricing methodologies for transfers of tangible products. Three of the five methods specified in US transfer pricing law should generate the same transfer price. The “comparable uncontrolled price method,” “resale price method,” and the “comparable profits” method should each achieve this result.

IRS regulations state: “The comparable uncontrolled price method evaluates whether the amount charged in a controlled transaction is arm’s length by reference to the amount charged in comparable uncontrolled transaction.”³⁷ In this approach, transfer prices should be determined by evaluating external prices for comparable sales, which serve as the same reference point for transfer price calculation. Concerning the second method the regulations state: “The resale price method measures the value of functions performed, and is ordinarily used in cases involving the purchase and resale of tangible goods in which the reseller has not added substantial value to the tangible goods by physically altering the goods before resale.”³⁸ Treasury regulations say: “If an applicable resale price (in the uncontrolled transaction) of the property involved in the controlled transaction is \$100 and the appropriate gross margin is 20%, then an arms-length result of the controlled sale is \$80 (\$100 minus (20% x \$100)).”³⁹ This would be the appropriate transfer price from all internal suppliers. The third approach, the comparable profits method, is very similar to

³⁷ IRS Regulation §1.482-3(b)(1)

³⁸ Ibid

³⁹ Ibid

the resale price method, but the organization's operating profit is evaluated instead of gross profit. "Under the comparable profits method, the determination of an arms-length result is based on the amount of operating profit that the tested party would have earned on related party transactions if its profit level indicator were equal to that of an uncontrolled comparable, and applying the profit level indicator to the financial data related to the tested party's most narrowly identifiable business activity for which data incorporating the controlled transaction is available..."⁴⁰

Under each of these three methods, the purchaser's transfer price should be the same, without regard to which internal supplier provided the product. Furthermore, IRS regulations do not permit taxpayers to pick and choose from the five methods when determining transfer pricing policies. The firm is bound by the best method rule, which says: "The arm's length result of a controlled transaction must be determined under the method that, under the facts and circumstances, provides the most reliable measure of an arm's length result."⁴¹ The IRS directs taxpayers to select the method that best supports the arms-length principle, not the most advantageous method. If one of the three methods above is the most reliable basis for determining arms-length results, it must be used. As Gresik (2001) writes "The 'best method' provisions legally obligate the transnational to prove its method best approximates an arms-length price" (p. 810).

Within the United States, the IRS imposes substantial penalties for not complying with transfer pricing laws. First, the IRS can adjust transfer prices to bring them in compliance with the arms-length standard.⁴² In addition, the IRS can impose substantial penalties on top of the adjustment. These penalties not tax deductible.⁴³ Many believe these penalties have motivated US-based firms to comply more carefully with transfer pricing laws. Skinner (2005) writes, "Procedural changes have made it less attractive to litigate transfer pricing disputes. First,

⁴⁰ IRS Regulation §1.482-5(b)

⁴¹ IRS Regulation §1.482-1(c)(1)

⁴² IRC §482

⁴³ IRC §6662(e), §6662(h)

Congress provided for transfer pricing penalties equal to 20% and 40% of the ultimate §482 adjustment. The trigger for penalties is \$5 million of aggregate misstatements. For a multinational corporation with billions of dollars of inter-company transactions, this threshold is easily reached” (p. 186). The 20% penalty is for “accuracy-related” issues, and the 40% penalty is assessed for “gross misstatement.”⁴⁴ And on top of the transfer pricing adjustment and the non-deductible penalty, firms must also pay accrued interest.⁴⁵ In one well known transfer pricing case, in 2006 the IRS reached a \$3.4 billion transfer pricing settlement with GlaxoSmithKline.

International Tax Planning

When businesses expand across international boundaries, they frequently create foreign branches or subsidiaries to facilitate doing business. MNEs form these organizations to comply with legal requirements and determine tax obligations. When they form organizations in another country the local tax laws govern business activities conducted there.

International businesses frequently transfer inventory and fixed assets from one country to another. MNEs might invent products in one country, manufacture them in a second, store them in a third, and sell them to customers in a fourth location. Since these activities cross international boundaries, MNEs need to calculate income in each locale to comply with local tax laws. Transfer prices for inventory, assets and services need to be calculated based on the arm’s-length standard.

Determining an arm’s-length transfer price is not always easy to do. Comparable trade prices are usually the starting point to determine a transfer price, but it may be challenging to find such prices. Gresik (2001) writes, “If a well-functioning market for intermediate goods exists, the appropriate value to place on the transfer is rather easy for tax authorities to determine. However, with transnationals the transferred assets are specialized enough that comparable products produced by firms not related to the transnational do not exist or they are intangible in nature” (p. 808). In addition, this is particularly true when the MNE is vertically integrated, and

⁴⁴ IRC §6662

⁴⁵ Ibid

it transfers work-in-process inventory between business entities. Firms may not sell similar, partially-completed goods to external customers, making external price comparisons difficult to obtain. Centralized supply chain planning may increase work-in-process inventory transfers, as businesses shift manufacturing processes to the most efficient location.

Transfer prices determine the revenue and income earned, as thus the taxes owed, in various jurisdictions. They are important both to tax authorities and MNEs. Income tax rates can vary substantially between countries. As previously mentioned, income tax rates can range from 2% in Puerto Rico to nearly 40% in Japan. Due to substantial tax rate differences, businesses have an incentive to seek locations that minimize their worldwide tax expense, while complying with international tax laws.

MNEs frequently form subsidiaries to perform a specific business purpose. These objectives may include inventing products, manufacturing products, distributing them, or selling goods and services. Forming subsidiaries to perform specific activities facilitates functional-based tax planning. According to Irving, Kilponen, Markarian and Klitgaard (2005), this approach supports a:

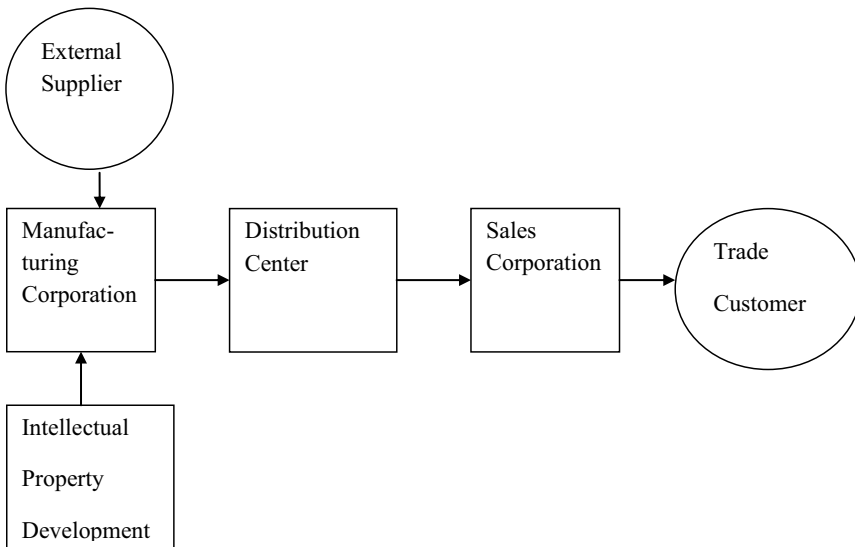
“principle that underlies many of the world’s taxing regimes: The income on which a company is taxed should reflect the functions the company performs, the risks the company takes on, and the assets the company has at its disposal. More specifically, companies earn separately identifiable economic returns on the functions they perform, the risks they take, and the assets they own or have developed. These distinctions are muted when an enterprise operates worldwide on a vertically integrated basis. However, they become significant once a company begins to isolate functions, risk, or assets in specific entities within the corporate group and ultimately deploys them in certain jurisdictions” (p. 59).

Creating entities for specific purposes facilitates transfer price determination. If external price comparisons are not available, one alternative is to determine an arm’s-length return for a specific business activity. For example, suppose a US-based business decides to sell products in

Canada. It plans to continue inventing and manufacturing products in the United States, and to sell them in the United States and Canada. It forms a Canadian sales subsidiary to sell products there. Its products are unique, and comparable trade prices are difficult to establish. However it can determine profit margins for comparable sales companies. Transfer prices could be calculated so the Canadian subsidiary could achieve a gross margin or a return on sales figure comparable to similar trade businesses.

To facilitate these profit comparisons, MNEs may create several entities in the same country, if they are formed for different business purposes. If a firm conducted manufacturing, and sales in the same country, they might be organized into separate entities to support transfer pricing analysis. At a minimum, they need to calculate financial results for these activities separately. Combining manufacturing and sales activities into one financial statement would make it very difficult to determine if the firm's profits were appropriate for the activities performed or risks borne there.

Larger MNEs may have elaborate value chains. These activities might include research and development, manufacturing, distribution, and sales. In the following graphical depiction, the MNE's arms-length transfer pricing policies must apportion profit between legal entities.



Note: Intellectual Property Development, the Manufacturing Corporation, the Distribution Center, and the Sales Corporation are all part of the same Multi-National Enterprise (MNE), and transfer prices need to be determined to apportion profits (or losses) between them..

Figure 2: Income Tax Planning

In this model, the intellectual property owner invents products and transfers the right to build them to the manufacturing corporation. After production is complete, the manufacturing corporation ships products to the distribution center, which stores them until they are sold. The sales corporation makes the trade customer sale. As the MNE operates in four different countries, it must pay income taxes in each. Tax rates may differ, so the MNE will want to structure its operations to minimize tax obligations, while complying with tax laws and the arm's-length standard.

As Irving, Kilponen, Markarian and Klitgaard (2005) write, "Because income, and therefore income taxation, typically follows functions performed, risks assumed and assets deployed, companies often achieve tax savings by locating various aspects of their business processes in tax favored jurisdictions" (p. 58). For example, the firms could assign certain risks, such as

warranty obligations, to the legal corporation that has the highest profit potential, located in a low-tax jurisdiction. Because it absorbs the most risk, it should earn the highest profit. At the same time, organizations that accept less risk, often in high-tax jurisdictions, merit less profit.

This approach increases total business risk. If profitable, the MNE lowers its tax rate. But if the MNE records losses, they are absorbed in the low-tax jurisdiction, and its worldwide tax rate increases. But this is the risk the firm knowingly takes to reduce its worldwide tax rate. If a firm believes it can consistently earn high profit margins, it is a risk worth taking.

Tax Law: Exemption versus Tax Credits

As discussed, companies operating abroad form subsidiaries to conduct business. They do this to comply with local laws and determine tax obligations. However, tax laws differ substantially from country to country. In general, parent countries tax business earnings using one of two methodologies. The majority tax only domestic earnings, while several countries tax worldwide earnings.

Taxing only domestic earnings is the simplest and most popular approach. In other words, the parent-country levies income taxes only on the domestic entity, and ignores income earned by foreign subsidiaries. Overseas subsidiary profits are taxed by those jurisdictions. The following example illustrates that approach. For clarity, all figures will be presented in dollars.

Suppose a German-based corporation owns a Mexican subsidiary. The company earns \$200,000 in Germany, and \$100,000 in Mexico. If the German tax rate is 39% and the Mexican tax rate is 50%, it would owe \$78,000 German income tax, and \$50,000 in Mexico. Income earned in Mexico would have no impact on taxes owed in Germany, and the company's worldwide tax rate would be 42.7%.

German-based Firm	German Parent	Mexican Sub.	Worldwide Results
Earnings	\$200,000	\$100,000	\$300,000
Tax Expense	\$78,000	\$50,000	\$128,000
Tax Rate	39%	50%	42.7%

Table 3: International Tax Exemption System

In contrast to the exemption system, several countries tax the worldwide earnings of businesses headquartered there. Gresik (2001) notes Italy, Japan, Norway, the United Kingdom the United States all currently use this approach (p. 802), though the United Kingdom may move to an exemption system (Weiner, 2007, p. 214). Since taxing profits twice would put its firms at a competitive disadvantage, these countries allow companies to take a credit for taxes paid abroad.⁴⁶ The following example shows both how tax credits work, and it illustrates certain problems the US Congress decided to rectify.

Suppose a US-based company earned \$200,000 in the United States and \$100,000 in Mexico. The US tax rate is 35%. The firm owes \$105,000 in worldwide taxes on its \$300,000 pre-tax earnings. If the company paid \$50,000 Mexican taxes, it could take a credit for that amount on its U.S. tax return. This would reduce its U.S. tax obligation to \$55,000.

US-based Firm	Worldwide Earnings	Mexican Subsidiary	Foreign Tax Credit	U.S. Tax Obligation
Pre-Tax Earnings	\$300,000	\$100,000	--	\$200,000
Tax Expense/(Credit)	\$105,000	\$50,000	(\$50,000)	\$55,000
Tax Rate	35%	50%	--	27.5%

Table 4: Foreign Tax Credits

⁴⁶ IRC §901(a) explains Foreign Tax Credits, and §901(b) explains eligibility requirements

In the above example, Mexico's high tax rates reduced the firm's US tax obligations and domestic tax rate. This potential caused the US Congress to place limitations on foreign tax credits. One law limits foreign tax credits to the percentage of foreign-sourced income.⁴⁷ Using the example above, a US-based corporation would first calculate a pre-credit tax obligation of \$105,000, or 35% of its \$300,000 in worldwide earnings. Its foreign tax credit is limited to \$35,000, which is one-third of its worldwide earnings, reflecting its foreign-sourced income share of the total. Its US tax obligation is determined by subtracting the foreign tax credit of \$35,000 from the \$105,000 figure. It owes \$70,000 U.S. income tax, and its worldwide tax expense would be \$120,000, shown below:

US-based Firm	Pre-credit obligation (1)	Mexican Subsidiary(2)	Foreign Tax Credit (3)	U.S. Tax Obligation (4)	Consolidated. Taxes (2) + (4)
Earnings	\$300,000	\$100,000	--	\$200,000	\$300,000
Tax Expense/(Credit)	\$105,000*	\$50,000	(\$35,000)**	\$70,000***	\$120,000****
Tax Rate	35%	50%	--	35%	40%

Table 5: Foreign Tax Credits Limited by share of Foreign Sourced Income

* 35% of \$300,000 is the pre-credit tax obligation

** As foreign-sourced earnings are one-third of total earnings, the tax credit is limited to one-third of \$105,000

*** The \$105,000 in pre-credit worldwide tax obligation in column 1, less the \$35,000 tax credit in column 3

**** \$50,000 in Mexican income taxes in column 2 plus \$70,000 in U.S. taxes in column 4

This limitation created an incentive to earn foreign-sourced income and increase the foreign tax credit. Creative tax departments have found ways to do this, such as transferring cash offshore to earn interest income abroad. To limit this, a second US tax credit law requires MNEs to separate

⁴⁷ For an explanation of foreign sourced income, see IRC §904(a)

earnings into several “baskets of income.”⁴⁸ Foreign tax credits earned in one basket cannot offset tax obligations from another basket. This prevents the company from increasing foreign tax credits by shifting passive income overseas. The passive interest income may not be used to generate a tax credit for the active income, which is earned from the sale of products or services.

Thus foreign tax credits are valuable, and need to be earned in the correct basket. In the absence of sufficient foreign tax credits, a company’s worldwide tax rate can increase. US-based firms need to monitor foreign tax credits to determine if they can defer all income taxes on foreign earnings. Tax credit policies in Italy, Japan, Norway and the United Kingdom should be investigated separately.

MNEs based in tax credit countries do not permanently reduce taxes by operating in tax havens, at least in theory. As Gresik (2001) writes, “The main advantage of deferral to transnationals is the ability to avoid paying home taxes that are reinvested in the foreign operations” (p. 803). Firms defer tax US tax obligations until the subsidiary repatriates cash to the parent company. Nonetheless, due to the time value of money, deferring taxes is valuable. In addition, tax authorities sometimes temporarily reduce income tax rates on repatriated funds. This encourages cash transfers and generates tax revenue, though at a reduced rate. Knowing this, many companies defer repatriation until tax rates are temporarily reduced. For example, the American Jobs Creation Act of 2004 reduced the tax rate on repatriated funds to 5.25% for that year, which motivated MNEs to transfer funds to their US-based parents.⁴⁹ Thus, in many cases firms do not merely defer tax obligations. They permanently reduce their worldwide tax rate. For these reasons MNEs frequently organize their business activities to defer tax obligations, even if the parent country taxes worldwide earnings.

⁴⁸ IRC §904(d)

⁴⁹ H.R. 4520, “The American Jobs Creation Act of 2004,” United States Congress Ways and Means Committee, June 4, 2004

Opportunities to Create an Income Tax Efficient Supply Chain

While tax efficient supply chain management has received some attention in academic journal, pre-tax cost minimization has been analyzed in much more detail. Cohen and Mallik (1997) write, “Finally, the global supply chain can take advantage of diversity in the international environment by recognizing and exploiting regional differences, i.e., in the level of product and process technology expertise, labor force capabilities, input factor costs, local tax rates, and the capabilities of off-shore vendors” (p. 194). However the article did not explain how firms can pursue these opportunities. The authors said: “Effective management of the activities dispersed throughout the global supply chain can result in lower production and distribution costs via the allocation of value-adding activities to facilities, tax minimization via transfer pricing between entities operating in different tax jurisdictions, financial arbitrage via international cash flow management...” (p. 201). As mentioned, they stated in 1997 that modeling of these opportunities was just beginning. By 2006 a number of articles cited in this paper demonstrated that tax authorities in many high-tax jurisdictions had noticed supply chain restructurings were reducing their tax revenue.

As discussed, some businesses today say they prefer to ignore geographic boundaries when restructuring supply chains. While these boundaries may appear arbitrary, they can have a material impact on income tax obligations. Thus it is a mistake to ignore taxes. For many companies it is their largest single expense. Supply chain analysis should explicitly consider international boundaries when they impact income tax obligations, and net income should be a key measure of supply chain success.

To determine where the best tax and supply chain planning opportunities exist, the MNE’s functional and legal model will be analyzed. The sales corporation, the distribution center, the manufacturing corporation, procurement organizations and shared service providers will be analyzed in turn to determine the optimal alternatives for income tax efficient supply chain planning.

Sales Corporations and Permanent Establishment

When international sales are minimal, businesses frequently sell their products to trade customers through other firms. The firm can sell products to a locally-based business that imports the goods and resells them to trade customers. In this situation, the MNE has no legal presence in that nation, earns no money within its borders, and thus pays no income taxes there.

As sales increase abroad, MNEs frequently hire their own employees. Salaried staff becomes more cost effective than selling through a third party. Businesses can also achieve greater business process control managing their own employees, so they may choose to establish a foreign branch or subsidiary.

Crossing international boundaries requires firms to address international tax complexities. Tax treaties simplify this process. Tax treaties are agreements between two countries that define tax requirements for parties covered by those treaties, and they normally supersede more general tax laws. Jones (2006) writes a tax treaty “is a bilateral agreement between the governments of two countries defining and limiting each country’s respective tax jurisdiction. The treaty provisions pertain only to individuals and corporations that are residents of either country and override the countries’ general jurisdictional rules. Under a typical treaty, a firm’s income is taxable only by the country of residence (the home country) unless the firm maintains a permanent establishment in the other country (the host country)” (p. 324).

Tax treaties may resolve potential international tax law disputes. For example, two countries may use different rules to define residency, and both may determine the same taxpayer resides in their country. Residing in two jurisdictions could significantly increase the taxpayer’s obligations. Treaties help resolve such issues. Businesses find treaties clarify tax obligations and may reduce taxes. Not only do they help the taxpayer, countries support tax agreements to stimulate investment, jobs and economic growth.

The United States, United Nations, and OECD have created model treaties countries use to negotiate agreements. Each has merits, but some believe the OECD Treaty is becoming the most influential. According to Streng (2009), “Because the OECD Model is under regular review this model treaty has become the real “yardstick” for constructing and revising bilateral income tax treaties around the world.” As Streng writes, “Consequently, even the U.S. Treasury Department representatives are often influenced by the OECD Model, more than their traditional perspective of starting negotiations from the U.S. Model Treaty” (p. 13-14). For this reason, this paper will focus on the OECD Model Treaty.

That treaty is frequently used to define the term “permanent establishment.” According to it, permanent establishment refers to “a fixed place of business through which the business of an enterprise is wholly or partly carried on.”⁵⁰ A fixed place of business specifically includes a place of management, a branch, and office, a factory, a workshop or any site developed to extract natural resources.⁵¹ The OECD Model Treaty provides a number of exceptions, in general permitting organizations to conduct limited support and auxiliary activities without triggering permanent establishment and local income tax obligations. Examples cited include permitting “the use of facilities for the purpose of storage, display or delivery of goods or merchandise,”⁵² or “solely for the processing by another enterprise,”⁵³ or “any other activity of a preparatory or auxiliary character.”⁵⁴ The treaty identifies a number of similar support examples that do not constitute permanent establishment.⁵⁵

Permanent establishment can also be created when significant business activities are conducted locally. For example, negotiating contracts triggers permanent establishment. Specifically, the OECD Model Treaty states when a person “in a Contracting State (has) an authority to conclude contracts in the name of the enterprise, that enterprise shall be deemed to have permanent

⁵⁰ “OECD Articles of the Model Convention With Respect to Taxes on Income and on Capital,” Article 5, Section 1

⁵¹ Ibid, Article 5, Section 2

⁵² Ibid, Article 5, Section 4(a)

⁵³ Ibid, Article 5, Section 4(c)

⁵⁴ Ibid, Article 5, Section 4(e)

⁵⁵ Ibid, Article 5, Section 4(a-f)

establishment in that State with respect of any activities which that person undertakes for the enterprise.”⁵⁶ This does not apply to contracts negotiated for the support and auxiliary activities cited in the previous paragraph.

Permanent establishment definitions can differ from country to country. Verlinden and Costermans (2006) write that when conflicts arise “The treaty definition (based upon the OECD Model Treaty) prevails over the definition under domestic law” (p. 175, comments in parentheses in the original), at least according to Belgium law. However permanent establishment rules are being reviewed in some countries, in large part due to supply chain restructurings. To illustrate this, developments in one country, the United Kingdom, will be reviewed.

Within the United Kingdom two key issues are examined. According to Casley, Pope and Hohtoulas (2006) the first is “if the principal is carrying on a business through a fixed base in the United Kingdom” (p. 200). The second is “if the UK Company is a dependent agent of the principal” (p. 200). The second issue is drawing more scrutiny within the United Kingdom. If the UK Company “habitually exercises an authority to conclude contracts in the name of the principal” (p. 200) then it can be viewed as a dependent agent, and permanent establishment may be suspected. A number of issues need to be examined closely to determine the outcome. If customer credit decisions are made in the UK, this suggests permanent establishment. Companies sometimes employ a non-contracting disclosed arrangement to avoid permanent establishment, but tax authorities may go beyond legal agreements and examine how business is actually conducted. “In practice, drawing the dividing line between contracting and non-contracting is not always simple. HMRC is likely to argue that having the principal actually ‘sign’ the contracts with customers may not be sufficient if all they do in reality is rubber stamp the terms and conditions including price, discounts etc. that have already been ostensibly agreed to by the local agent” (p. 200). Ultimately the key issues are whether the UK organization is accepting risk and making key business decisions, not only contractually, but in practice. When

⁵⁶ Ibid, Article 5, Section 5. The word “has” was inserted by the author of this article.

risk is assumed or business decisions are made within the United Kingdom, it is more likely that UK tax authorities will assert permanent establishment. But all of the facts and circumstances are evaluated by tax authorities, and judgment is applied, especially in light of supply chain restructurings that test the law's limits. Developments in other countries should be investigated separately.

Tax impact is more difficult to determine when bilateral tax treaties do not exist. Jones (2006) says, "If a U.S. firm conducts any business in a country that does not have an income tax treaty with the United States, the host country's jurisdiction depends on its unique tax laws" (p. 324). In the absence of a tax treaty, the firm needs to research the local tax laws. Jones says "This determination is often subjective and results in considerable uncertainty for the firm. Moreover, the requisite level of business activity in non-treaty countries is often much less than the maintenance of a permanent establishment in the country" (p. 324). For these reasons firms find it is easier to expand into countries in which bilateral tax treaties exist.

Whether or not the MNE forms an overseas branch or sales corporation, MNEs frequently expand into new markets to increase sales and profits. For technologically-advanced products, demand is strongest in the most industrialized countries. Developed countries also impose relatively high corporate income tax rates. As a result, sales corporations are poor opportunities to improve profits through an income tax efficient supply chain. There are no simple ways expand into large, prosperous markets and keep taxes low.

To demonstrate this, consider the population, GDP and income tax rate of G-7 countries, which are some of the world's largest economies. While these are some of the world's largest markets, the tax rates are substantially higher than in many tax havens, to be shown subsequently. The following table shows these figures for each G-7 country:

Country	Population (000 omitted)	GDP (in million \$)	Per Capita GDP	Max. Corporate Tax Rate--2007
U.S.A.	301,110	\$10,320.6	\$34,275	39.3% ⁵⁷ *
United Kingdom	60,776	\$1,530.27	\$25,179	30.0%
Canada	33,390	\$767.14	\$22,975	36.1%
France	63,713	\$1,382.76	\$21,703	34.4%
Germany	82,401	\$1,925.87	\$23,272	38.9%
Italy	58,148	\$1,100.71	\$18,929	33.0%
Japan	127,433 ⁵⁸	\$4,803.20 ⁵⁹	\$37,692	39.54 ⁶⁰

Table 6: G-7 Population, GDP and Corporate Income Tax Rates

* The United States tax rate includes both the Federal tax rate of 35.0% and an average State income tax rate.

High tax rates rarely discourage companies from selling products in these populous and wealthy countries. For example, if strong Japanese demand exists for a company's products, a 40% tax rate is unlikely to prevent market entry. As long as marginal revenue exceeds marginal cost the sales are profitable, despite the relatively high share due the Japanese government. Avoiding the large Japanese market or selling through Japanese companies may be financially unattractive alternatives.

A few companies have successfully bypassed local sales corporations and sold products from another jurisdiction. They need to avoid permanent establishment to do this. In most industries this is not possible, as it is essential to have local sales and service organizations there to provide

⁵⁷ OECD Tax Database, 2007; see <http://www.oecd.org/ctp/taxdatabase>; see Table II.1, Combined Corporate Income Tax Rate, 2007. Note that the U.S. rate includes both Federal taxes (35.0%) and an average State tax rate.

⁵⁸ "World Population Statistics"; <http://www.geohive.com/default.aspx>; July 1, 2007

⁵⁹ "Historical Gross Domestic Product," World Bank Development Indicators, 12/19/2006

⁶⁰ OECD Tax Database, 2007; see <http://www.oecd.org/ctp/taxdatabase>; see Table II.1, Combined Corporate Income Tax Rate, 2007

customer support. But other business models are possible. Simpson (2005) writes, “Microsoft and others are now going further. Microsoft delivers its Windows products to European customers straight from Ireland, and the profits go straight back to Ireland. Since most of the profits from Microsoft programs are in the form of copyright licensing fees, ‘it is likely that low or nil taxes are payable in the other EU states,’ says John Ward, a tax professor at the University of Ulster in Belfast, Northern Ireland” (p. 1).

To keep its tax rate low, Microsoft needs to avoid permanent establishment issues associated with these sales. Microsoft has structured its tax model to locate revenue recognition and risk with its Irish subsidiary. In some cases software firms can distribute products and provide support over the Internet, creating opportunities not available in other industries. To achieve its tax objectives, the sales into Europe need to be conducted from Ireland.

Organizations within an MNE must collaborate to make this work successfully. Software firms may be able to do this more successfully than others, in large part due to the ease of Internet distribution and overseas product support. But if the selling agent can avoid permanent establishment, the approach above should be considered. To accomplish this, product marketing needs to determine whether they can sell and support products successfully without a local presence. Legal departments need to do an in-depth examination of permanent establishment laws. The tax department can analyze the tax impact. And supply chain organizations can quantify manufacturing and distribution costs.

Distribution Centers

Distribution centers receive finished goods from manufacturing corporations, and later deliver products to sales corporations. They add value by reducing the number of delivery nodes between manufacturing organizations and retail customers, by consolidating storage, and by efficiently and promptly delivering customer goods.

Companies do not need distribution centers in each country the firm sells products. The enterprise can thus determine how many are needed by focusing upon customer requirements and cost management. Companies frequently centralize distribution activities to achieve economies of scale. Many MNEs create regional distribution centers to service several countries. For example, Skjett-Larsen, Schary, Mikkola and Kotzab (2006) write, “Many firms in Europe rely on one or a few distribution centers servicing all customers within a time window of 24-72 hours, depending upon the location of customers” (p. 134). Centralization strategies may create an opportunity to create an income tax efficient supply chain.

If the parent-country exempts foreign earnings from domestic taxation distribution centers may be good opportunities to create a tax efficient supply chain. MNEs can permanently avoid domestic income taxes, and parent-country tax laws do not restrict distribution centers. Economic efficiency can determine the number of distribution centers, not legal requirements. To analyze the opportunity, the supply chain organization can calculate operational and distribution costs. The tax department can project transfer prices and calculate tax benefits. Together they can project distribution center net income in various locations, and recommend the best location.

However when the parent-country taxes worldwide earnings, tax laws should be reviewed closely. For example, US tax laws limit distribution center opportunities. As mentioned, the US taxes worldwide earnings, permits tax credits, and defers domestic taxation until the subsidiary repatriates funds to the parent. However tax laws deny deferral in certain situations. US tax code “Subpart F” requires immediate taxation of overseas entities in certain situations.⁶¹ As Jones (2006) writes::

“Not all foreign source income earned by a CFC must be constructively repatriated to its U.S. shareholders. Only narrowly defined categories of income (labeled Subpart F income in the Internal Revenue Code) are treated as constructive dividends. Conceptually, Subpart F income is artificial income

⁶¹ Subpart F is found in IRC §951-§964

because it has no commercial or economic connection to the CFC's home country. Subpart F has many complex components, one of the more important of which is income derived from the sale of goods if (1) the CFC either buys the goods from or sells the goods to a related party and (2) the goods are neither manufactured nor sold for use within the CFC's home country" (p. 334-335).

Subpart F applies to distribution centers in certain situations. Suppose a MNE formed a distribution center in a low-tax jurisdiction in which it neither manufactured nor sold goods. The income earned by this distribution center would be subject to Subpart F and would be immediately taxable in the United States.⁶² If the U.S. tax rate is higher than the local tax rate the difference between the two cannot be deferred, and is owed to the US treasury. According to Lemein, McDonald and Lipeles (2007) when Subpart F applies "Shareholders have to recognize the income *regardless* whether the U.S. Shareholders receive an actual dividend from the CFC or not" (p. 5). Thus a US-headquartered firm would not be able to defer US tax obligations in this situation.

However not all distribution centers are subject to Subpart F. It does not apply when a distribution center is located in the same country the company either builds or sells products. As an example, suppose a firm manufactures products in Singapore, and needs to form a Southeast Asia distribution center. Subpart F would not apply to a Singapore-based distribution center, as the company manufactures goods there. The low Singapore tax rate would apply. Locating the distribution center in a third country could increase the tax rate from 18% (Singapore's rate) to 35% (the US Federal rate). In this case the MNE would reduce income taxes if it located the distribution center in Singapore. The MNE should weigh these savings against supply chain costs and other business objectives.

⁶² IRC §941

Similar laws in other tax credit countries (Italy, Japan, Norway, and the United Kingdom) should be investigated separately. However the issues posed by US tax law demonstrate that to maximize net income, supply chain and tax organizations should collaborate.

Manufacturing Corporations

As demonstrated, sales companies show limited potential to create a tax efficient supply chain. Most businesses need a local presence to sell their goods and services, which triggers permanent establishment and local income tax obligations. Tax rates are comparatively high in the developed countries. While Microsoft's Irish sales strategy has been very successful, few businesses can sell and support products without a local presence.

Distribution centers can be attractive opportunities to integrate supply chain and tax planning, particularly if the parent country exempts earnings from domestic taxation. However in some tax credit countries, such as the United States, tax laws do not permit deferral in many situations. Close attention to international tax laws is required when the parent-country taxes worldwide earnings.

Manufacturing corporations may be the best opportunity to integrate supply chain and tax planning. To achieve economies of scale, most businesses prefer to concentrate manufacturing resources and limit the number of manufacturing sites. This makes manufacturing site selection very important. Many factors motivate manufacturing site location, including local wage rates, employee skill sets, inbound and outbound logistics costs, access to materials and parts, proximity to customers, transportation services, the local regulatory environment, political stability, and income tax rates. From a tax perspective, manufacturing corporations do not face the Subpart F tax laws facing distribution centers. Manufacturing products requires technology, skills and fixed assets, thus creating business substance international tax laws generally support. As a result, MNEs frequently designate the manufacturing corporation the profit center for residual or superior earnings. It may also be assigned certain risks, such as the cost of product failure or warranty costs. One organization often takes the most risk in a MNE, and earns

superior rates of return when the business does well. It absorbs losses when the business performs poorly. Other entities frequently accept less risk, and earn modest but consistent returns for services performed, whether the entire business succeeds or struggles.

To illustrate this, suppose a MNE manufactures products in one country, distributes them in a second, and sells products in a third. Furthermore, this business consistently earns superior rates of return, akin to the high earnings earned by Microsoft's operating system business. The business must establish transfer prices to achieve arm's-length results. The MNE can structure its transfer pricing so the sales corporation and distribution centers earn adequate profits. The earnings must be sufficient to satisfy tax authorities, who compare results with many trade businesses performing similar functions, few of which are so successful. The income need not be above average, simply because the entire business is very profitable. The manufacturing corporation realizes the superior profits and also accepts the risk of loss, should the business perform poorly.

Describing a similar structure, Irving, Kilponen, Markarian and Klitgaard (2005) commented:

“Similarly, a foreign affiliate engaged in manufacturing often will earn returns not only for the underlying manufacturing activity—which is essentially a service—but also for the risks associated with owning raw materials, work-in-process, and other inventory. It will also earn returns for its manufacturing know-how in the form of proprietary processes. Here again, the economic returns ascribed to the assumption of risks and ownership of assets and intangibles can result in the foreign affiliate earning a significant level of income” (p. 60).

Some countries seek to attract manufacturing, and offer low tax rates to attract businesses there. Often these countries are relatively small, and low tax rates attract jobs that spillover into the local economy. Singapore, Ireland and Puerto Rico are all small jurisdictions offering low income tax rates to attract manufacturing activities. Lowering tax rates can actually increase government revenue, as the additional taxes paid by a few major employers can offset broad tax

reductions. Moreover, lower tax rates generate jobs with a multiplier effect, as support activities increase to supply necessary services. The following table shows the population, GDP, and tax rates in those popular tax havens:

Location	Population (000 omitted)	Gross Domestic Product (in billion dollars)	Per Capita GDP	Corporate Tax Rate
Ireland	4,109	\$110.74	\$26,951	12.5% ⁶³
Puerto Rico	3,944	\$67.71	\$17,168	2-7% ⁶⁴
Singapore	4,533 ⁶⁵	\$94.51 ⁶⁶	\$20,849	18% ⁶⁷

Table 7: Population, GDP and tax rates in selected tax havens

While these are the published income tax rates there, some countries also negotiate even lower tax rates when they want to attract desirable businesses. Businesses with excellent growth prospects and that contribute to an educated workforce can sometimes negotiate lower tax rates.

The MNE and tax haven may both benefit. The business can substantially reduce its tax obligations by shifting operations to a country with low tax rates. The tax haven attracts jobs, develops the local economy, and may actually increase tax revenue. When the country's population is small, the tax revenue can be significant. Simpson (2005) reports that Microsoft's taxes paid one year in Ireland amounted to \$77 for each citizen (p. 1).

⁶³ OECD Tax Database, 2006; see <http://www.oecd.org/ctp/taxdatabase>; see Table II.1, Combined Corporate Income Tax Rate, 2006

⁶⁴ 13 L.P.R.A. § 10101, Puerto Rico Tax Laws

⁶⁵ "World Population Statistics"; <http://www.geohive.com/default.aspx>; July 1, 2007

⁶⁶ "Historical Gross Domestic Product," World Bank Development Indicators, 12/19/2006

⁶⁷ Singapore Income Tax Act, (CAP 134) Part XI, Section 43

Thus MNEs frequently organize their business to locate their most profitable organization in tax havens, such as Singapore, Ireland and Puerto Rico. The manufacturing corporation and/or intellectual property owner is frequently that activity. To align risk and reward and support their tax strategy, the more profitable legal organization accepts the most business risk.

This structure creates an opportunity to earn superior rates of return in low-tax locations. The high returns earned by the manufacturing corporation or intellectual property owner are not visible to tax authorities in other jurisdictions. Furthermore, their governments have no legal claim to profits recognized by the risk-taking organization. Tax authorities in the residual profit center enjoy the earnings recognized and taxes paid there.

In summary, for many MNEs manufacturing corporations may be the best opportunity to develop an income tax efficient supply chain. The MNE can determine the number of manufacturing sites by economic necessity, and may want to achieve economies of scale by limiting the number of manufacturing sites. Manufacturing products creates business substance international tax laws support, so these organizations are not encumbered by limitations such as Subpart F. From a tax perspective, manufacturing organizations can be structured as the designated risk-taker within the enterprise, eligible to earn high rates of return if the business succeeds. A number of tax havens offer low tax rates and offer incentives to attract manufacturing activities, particularly in high-technology industries. For these reasons manufacturing site selection offers many firms an excellent opportunity to create an income tax efficient supply chain.

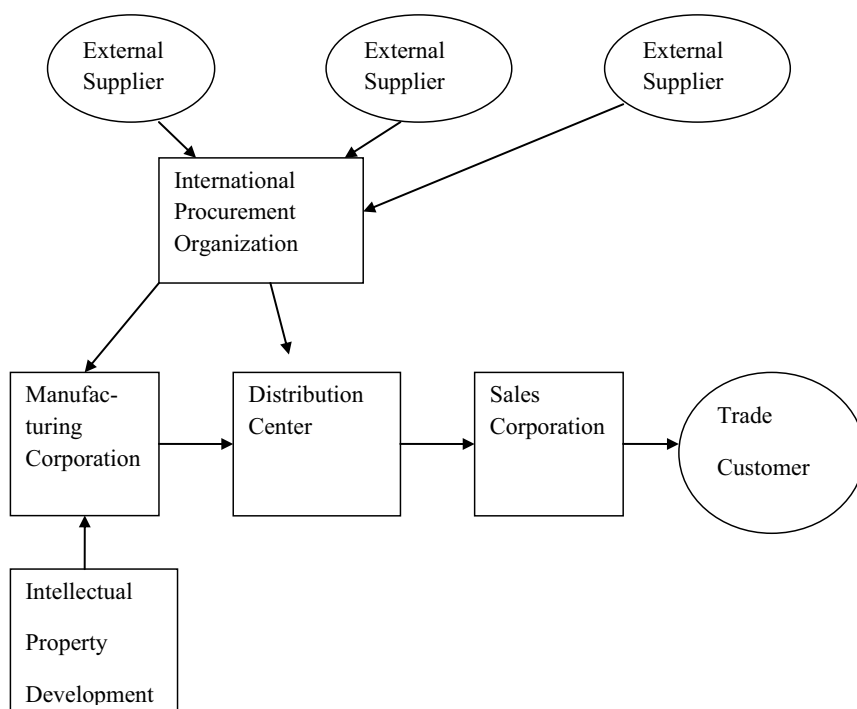
Procurement Organizations

As previously discussed, historically MNEs created autonomous overseas subsidiaries, responsible many business processes. More recently MNEs have restructured supply chains to centralize business processes where they can be performed most efficiently. Trent and Moncza (2003) found that MNEs are shifting from purchasing materials domestically to sourcing materials globally, and that the purchasing function increasingly crosses international borders (p.

26). According to Casley, Pope and Hohtoulas (2006) in the United Kingdom “There has been an increased tendency for groups to centralize their purchasing activity and pool a group’s purchasing power. Potential procurement savings often quoted can range from 5% to 20%, depending on industries and a group’s starting point” (p. 196). They write cost savings are achieved through: “better negotiations, volume, improved relationships with suppliers and well coordinated logistics from better order and delivery processes” (p. 196). According to Verlinden and Costermans (2006) Belgium has also attracted international procurement organizations (p. 173).

Centralization strategies differ from company to company, depending upon unique business needs. But frequently procurement organizations manage this activity for several international sites. As an example, a company could have one procurement organization for the U.S., another for Europe, and a third in Southeast Asia. The IPO can produce cost savings while supporting local needs.

IPOs are an opportunity to link supply chain and tax planning. They need to recover their costs and operate profitably, so IPOs sell goods and services to related parties at arms-length prices. Firms should consider tax ramifications when locating that activity. Irving, Kilponen, Markarian and Klitgaard (2005) noted, “Linking these two concepts, it is possible for companies to centralize their procurement functions, proprietary procurement processes, and know-how into specific corporate entities in low-tax jurisdictions. These ‘procurement companies,’ are entitled, from a tax perspective, to charge other corporate entities an arm’s length amount for the value-added procurement activities undertaken on their behalf” (p. 59). A graphical depiction follows:



The IPO leverage its purchasing power to reduce costs of parts and materials from external suppliers.

Figure 3: International Procurement Organizations

Once again, MNEs need to investigate the parent country's relevant tax laws. If the parent country exempts foreign subsidiaries from domestic taxation, the procurement offices can reduce the enterprise's worldwide tax rate. But this may not be possible if the parent country taxes worldwide earnings. Within the United States, Subpart F governs IPO tax obligations in certain situations. If the IPO is located in the same country it purchases goods or sells goods, the local income tax rate applies.⁶⁸ But if the IPO is located in a third country, in which the firm neither buys nor sell goods, the US rate applies. This is relevant if the MNE operates in a tax haven. For example, if a US-parent company manufactured goods in Ireland, and formed an IPO there,

⁶⁸ Subpart F is found in IRC §951-§964

the local 12.5% income tax rate would apply. Locating the IPO in a country where it had no operations could trigger Subpart F and the 35% US federal tax rate. The 22.5% difference between the worldwide and local tax rate would be owed to the US Treasury.⁶⁹

Compensation for centralized purchasing is likely to be a cost-plus markup. It may be difficult to obtain comparable prices for such procurement services. While independent parties procure goods for clients, they frequently assume more risk than internal purchasing organizations. Verlinden and Costermans (2006) write, “Group central purchasers, will, however, often not perform functions or assume risks that are similar to many independent parties, as for example, commercial risks may differ” (p. 173). OECD Guidelines suggest cost-plus compensation is most appropriate when comparable transactions cannot be identified. Verlinden and Costermans (2006) write “In the absence of uncontrolled comparables and assuming that the central purchaser’s involvement is that of order centralization without an entrepreneurial role, it is likely to receive remuneration based on a cost-plus methodology” (p. 173).

Shared Service Providers

In addition to IPOs, MNEs have centralized other activities to provide support across international boundaries. Wright (2006) states “This occurs for a variety of reasons, e.g. cost reduction strategies that result in centralization of regional support functions...” (p. 202). Wright (2006) says centralized business processes include “various regional support functions such as finance, marketing, information technology (IT) and human resources (HR)” (p. 202). Verlinden and Costermans (2006) have also observed the growth of shared service providers in Belgium (p. 172). For example, the MNE might centralize certain accounting functions, such as payroll, accounts receivable collections, or accounts payable. Or it might create a regional information technology center, to meet the IT needs in a number of countries. These organizations should also consider local tax rates when making location decisions. In addition, since they are not involved in the buying and selling of goods, they do not face Subpart F restrictions. According to Wright, “a cost-plus markup is ordinarily used to bill both manufacturing and reselling affiliates for the services they have received” (p. 202). It can be

⁶⁹ Ibid

difficult to find comparable organizations providing similar services and assuming comparable business risks.

Defending the Income Tax Efficient Supply Chain

As explained earlier, tax authorities are becoming concerned with the tax impact of supply chain restructurings. High income tax jurisdictions, such as the United States, the United Kingdom, France, the Netherlands, Spain and Belgium, believe supply chain restructurings are reducing their tax revenue, so they are paying more attention to this activity. According to Casley, Pope and Hohtoulas (2006), “In the United Kingdom, the level of attention from the tax authorities has increased to match the greater flexibility with which MNEs approach their supply chain” (p. 194). As tax practitioners frequently have to defend these restructurings to tax auditors, what actions can they take to support their position?

First, tax practitioners need to explain the business rationale for the supply chain restructuring, to satisfy the business purpose doctrine. They should be able to identify clearly how the restructuring improves the supply chain, customer satisfaction, or the pre-tax cost structure. Reduced trade barriers and improved communication technologies have created many opportunities to restructure and improve supply chains, and to eliminate overhead by centralizing many processes, so in most cases this should not be difficult to do. Restructuring the supply chain once, considering both operational and tax consequences, helps to satisfy the business purpose doctrine. Reengineering the business process first, and later moving an activity solely for tax purposes, increases audit risk. Tax authorities can argue the latter action was done solely to reduce taxes and the business purpose doctrine may not be satisfied. This is one more reason why tax departments and supply chain organizations should collaborate when making location decisions.

Second, it is essential to comply with the arm’s length transfer pricing principle. As Casley, Pope and Hohtoulas (2006) write, “A primary requirement for tax purposes is to price the transactions arising from the supply chain model on an arm’s length basis” (p. 194). This may

seem obvious, but when an MNE restructures its supply chain, and changes responsibilities and risk within the enterprise, it may neglect to review its transfer pricing policies. When the supply chain is restructured, the risks and responsibilities of a subsidiary may materially change, and transfer pricing policies should be evaluated. If the tax department does not participate in the restructuring, it may incorrectly assume their transfer pricing policies need no modification. Schwarz and Castro (2006) write, “In the context of multinational enterprises, these changes lead to changes in the risk profile of the entities within the group and consequently in the profitability of operations in countries where activities take place. The changes may result in overall changes in the group’s profitability or a shift in the jurisdiction where profits arise—away from the place where activities are undertaken to the place where risks are assumed or functions are moved” (p. 187). Restructuring the international supply chain necessitates reviewing transfer pricing policies, and this may not happen if the tax department is not at least aware of supply chain changes.

Third, it is important to ensure documentation is current, legal agreements between business entities are still valid, and the impact on transfer pricing policies documented. As Casley, Pope and Hohtoulas (2006) write, “As ever, the answer is also to ensure that the transfer pricing model adopted is solidly and competently implemented, namely that legal contracts reflect functional reality; that intercompany transactions are properly priced; that appropriate documentation and controls are in place; and that PE risks have been addressed” (p. 201). Concerning the French perspective, Douvier (2006) writes, “However, if (1) the taxpayer has prepared adequate documentation in anticipation of a tax audit and if that documentation supports the new methodology, (2) comparables have been gathered and (3) the functions have been modified and the risks shifted out of France, the risk that the tax authorities will be successful in their challenge is technically remote” (p. 182).

Tax authorities in Europe and the United States may use different approaches to challenge restructurings. In Europe tax authorities frequently first question whether permanent establishment laws have been breached. In the 2006 issue of International Transfer Pricing

Journal five articles written from a European perspective (United Kingdom, Belgium, France, Spain and the Netherlands) said local tax authorities looked closely at this issue. Referring to a meeting of the OECD's Center for Tax Policy Administration (CTPA), one article said: "One of the key questions of the CTPA Roundtable pertained to the notion of a deemed PE created by activities of a limited function for the foreign related parties for which a local entity is acting."⁷⁰ Therefore it is important for tax practitioners in Europe to be aware of the permanent establishment rules and developments in these countries.

Within the United States, tax authorities do not focus often on permanent establishment. According to Wright (2006), "In many countries, the permanent establishment (PE) rules are used to attack these structures. Such is not the case in the United States, however, as the Internal Revenue Service (IRS) typically uses the transfer pricing rules to evaluate whether the supply chain restructuring is acceptable...In virtually all cases, the IRS moves immediately to the transfer pricing question, without alleging the existence of a PE" (p. 202). According to that author, the IRS prefers to use other code sections or regulations to attack the tax consequences of the restructuring. The IRS lost a permanent establishment case, *Tasei Fire & Machine Insurance Co., Ltd. Et al v. Commissioner* (1995), which may make it reluctant to litigate permanent establishment.⁷¹ Wright (2006) says "Thus it is important, from a U.S. perspective, to obtain professional international tax assistance when planning a supply chain restructuring" (p. 202).

Some believe tax authorities need to provide more guidance on these issues. Carreno and Oliete (2006) write "There is an urgent need for clear guidance" (p. 193). However business process changes frequently proceed more rapidly than tax law, so it is likely tax practitioners will need to defend restructurings without the benefit of detailed guidelines from tax authorities.

⁷⁰ See International Transfer Pricing Journal, July/August, 2006, page 189

⁷¹ *Tasei Fire & Machine Insurance Co., Ltd. Et al v. Commissioner*, (Tax Ct. 1995).

Conclusion

MNEs around the world are restructuring their supply chains to achieve operational objectives. These restructurings may also shift business operations to low-tax jurisdictions. Tax authorities in many high income tax countries are very aware of these restructurings, and are concerned with lost tax revenue. For this reason alone, tax departments need to understand supply chain developments. They need to document these activities and defend the firm's actions to tax authorities.

While historically supply chain papers have emphasized pre-tax cost minimization, there is evidence in recent years that firms are explicitly considering income taxes when they make supply chain decisions. For many firms it is one of their largest expenses, and ignoring its impact is a mistake. Most studies suggest net income is the single best measure of firm performance, so firm's should focus on improving that figure.

Encouraging supply organizations and tax departments to collaborate has many advantages. Through collaboration firms can make better supply chain decisions that aim to improve net income, the key driver of shareholder value. Beyond this tax departments need to be informed about supply chain restructurings to satisfy tax authorities. Tax departments need to document these changes. Legal agreements between business entities may need to be rewritten, and transfer pricing policies may need to be altered, to reflect changes in risk and responsibility. Tax departments will need to prepare documentation for tax authorities demonstrating the restructuring satisfies the business purpose doctrine. Ignoring these responsibilities increases the risk of an unsatisfactory tax audit and related penalties.

The corporation's functional and legal model has also been analyzed to determine where the best opportunities exist to link supply chain and tax planning and improve a firm's net income. In most situations the sales company is not a good opportunity, due to high tax rates in developed

countries, and the need to provide local sales and service support. In some cases it may be possible to make sales from a third country located in a low tax location. However this may not be possible for most businesses to do. The seller needs to be very careful not to create a permanent establishment in the local country it is trying to bypass, and most businesses may not be able to sell and support products without a local presence.

Distribution centers and International Procurement Offices have potential, but applicable tax laws should be examined, to determine if parent-country tax laws limit this opportunity, as Subpart F does in the United States.

Shared service providers are another good opportunity. As mentioned, many MNEs are forming centralized IT services, accounting functions, or Human Resource organizations that support a number of countries. In many cases these activities are funded through cost-plus markups upon services provided. It makes sense to consider income tax rates when determining where to locate these activities.

Manufacturing companies may present the best opportunity for many firms. Manufacturing products creates business substance international tax laws support. Employees must be hired and trained, manufacturing know-how must be transferred, and assets must be purchased, installed and used. The manufacturing organization often assumes the most business risk, and earns superior profits when the business is successful. Since tax havens often seek to attract manufacturing activities, income tax rates are frequently low in these locations. As mentioned, much of the growth in both Ireland and Puerto Rico has been in manufacturing activities.

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Escaping the U.S. Tax System: From Corporate Inversions to Re-domiciling

Abstract

U.S. corporate income tax rates are now the highest in the world. And unlike most countries, the U.S. also taxes the overseas profits of its Multinational Enterprises (MNEs). Worldwide taxation can increase a firm's tax obligations, and substantially complicates the process of calculating those liabilities. To avoid these costs and challenges, in the prior decade a number U.S.-based MNEs moved their corporate headquarters overseas through corporate inversions, which were reincorporation transactions that had negligible impact upon a company's operating activities. In response, the U.S. Congress enacted IRC §7874 in 2003, which was designed to curtail this activity. This law appears to have substantially reduced corporate inversions. However there are signs more firms may consider moving their headquarters abroad. This paper analyzes the most recent developments in this field, and explains new approaches U.S.-based MNEs might use to escape U.S. international tax laws.

Background

In the late 1990's and early 2000's, a number of large, U.S.-based Multinational Entities (MNEs) transferred their corporate home abroad through corporate inversions. In corporate inversions these U.S.-based firms reincorporated to nearby tax havens to reduce their tax obligations. In general these were paper transactions that moved the Multinational Enterprise's (MNE's) corporate home, but had little or no impact upon the firm's operations. As the U.S. Office of Tax Policy (2002) wrote: "Although an inversion transaction requires significant restructuring as a corporate law matter, the effect of such a transaction on the actual management and operation of the inverted company is generally limited" (p. 15).

While inverting firms said this action was necessary to compete effectively against foreign businesses, corporate inversions created considerable controversy within the United States. U.S. legislators and tax officials were concerned with the foregone tax revenue, according to the Office of Tax Policy (p. 2). Corporate executives were criticized for moving their corporate home abroad (Godar, O'Connor and Taylor, 2005, p. 1). In response, in 2003 the U.S. Congress enacted IRC §7874, which appears to have substantially reduced inversion activity.

In explaining inversions, many U.S.-headquartered firms said American tax laws substantially increased their cost of doing business. Furthermore, currently the United States corporate income tax rates are the highest in the world. While many countries have lowered their income tax rates in recent years, the United States has maintained comparatively high income taxes. In addition, U.S.-headquartered businesses are penalized by very complex international rules that tax the firm's worldwide income, and substantially complicate the process of determining tax obligations. These tax policies increase the U.S.-based MNE's cost of doing business. In contrast, most other countries impose lower income tax rates and do not tax overseas profits. U.S.-headquartered firms bear substantial tax costs, and must wonder whether there are significant offsetting benefits. So companies might ask themselves: is there a way to escape the burden of high U.S. income tax rates and complex tax rules?

In the late 1990's and early 2000's a number of U.S.-based MNEs accomplished this through corporate inversions. The U.S. Office of Tax Policy (2002) defined an inversion as "a transaction through which the corporate structure of a U.S.-based multinational group is altered so that a new foreign corporation, typically located in a low- or no-tax country, replaces the existing U.S. parent corporation as the parent of the corporate group" (p. 1). In most cases inversions were legal transactions in which a new corporate home was found, but left the firm's business operations effectively untouched. In addition to reincorporating their headquarters abroad, the firms generally transferred ownership of their Controlled Foreign Corporations (CFCs) to the overseas headquarters or another overseas entity. The Office of Tax Policy wrote: "This basic reincorporation outside the United States often is accompanied by a series of other restructuring steps. Most commonly, the associated restructuring involves a shift outside the United States of the ownership of the group's existing foreign operations, accomplished through the transfer of the existing foreign operations to the new foreign parent corporation or a foreign subsidiary thereof" (p. 4). By transferring their overseas operations to foreign entities, those inverted businesses lowered their worldwide tax rate. They also simplified the process of calculating tax obligations by avoiding worldwide income taxation.

While corporate inversions generally reduced the firm's tax rate, they reduced the U.S. treasury's tax collections. They also generated negative publicity. Corporate managers who supported inversions were often denounced as unpatriotic and immoral (Godar, O'Connor and Taylor, 2005, p. 1). In response, the U.S. Congress passed IRC §7874, which was designed to preserve U.S. tax revenue. IRC §7874 did not prohibit corporate inversions, but said the U.S. would continue to tax inverted corporations as domestic entities, as long as 60% or more of the firm's stock was held by the same shareholders before and after the inversion. The law has generally been considered successful at achieving its intended objective, as the pace of U.S. corporate inversions appears to have slowed since that law was passed (VanderWolk, 2010, pp. 1-2, and Leitner and Glicklich, 2009, p. 515).

Since IRC §7874 was enacted corporate inversions have attracted less attention. But it is possible this will change in the near future. The U.S. corporate income tax rate is now one of the world's highest. Furthermore, corporate income tax rates are declining in many other countries, and more countries are exempting worldwide income from domestic taxation. High tax rates and worldwide taxation policies may make the U.S. a less attractive headquarters location. Moving abroad might be an escape route more will consider, and there are still ways this can be accomplished, despite IRC §7874 and supporting Treasury Regulations.

As mentioned, the pace of corporate inversions appears to have slowed since IRC §7874 was passed. But some tax professionals believe they may become more frequent in the future. Leitner and Glicklich (2009) say privately held U.S. firms are continuing to invert. They write, "The tide has slowed, but the anti-inversion rules have not successfully eliminated all expatriation activity, especially in privately held U.S. companies" (p. 515). VanderWolk (2010) believes §7874 has been effective at limiting inversions of public companies, but this may change. He writes: "Section 7874 is widely believed to have had a severe chilling effect on inversions of publicly held corporations, but they may stage a comeback. In addition to potentially increased tax costs due to new international tax rules, factors such as reduced unrealized gain due to the economic downturn of 2008-2009 and rapid growth in foreign markets may lead to more inversions in the future" (p. 1-2). As an example, a U.S.-based firm, Ensco, recently moved its headquarters to the United Kingdom. This action, in addition to VanderWolk's comments, indicates that analyzing recent developments in corporate inversion activity is merited.

This paper contributes to knowledge of international tax issues by analyzing the most recent developments in corporate inversions. Current developments include comparatively high U.S. income tax rates, new Treasury Regulations designed to limit tax-motivated corporate inversions, and the relocation of a publicly-held firm, Ensco, from the United States to the United Kingdom. This paper explains why and how U.S.-headquartered MNEs firms may re-domicile their headquarters abroad to escape U.S. tax laws. This paper also offers a distinction between

corporate inversions and corporate re-domiciling, in which firms not only reincorporate, but shift the management and control of a MNE from one country to another. This paper suggests corporate re-domiciling may be one approach firms will use to escape U.S. tax laws.

Literature Review

Between 1999 and 2003 a number of U.S.-based multinationals moved their corporate headquarters abroad. The expatriating firms included six members of the S&P 500 index: Cooper Industries, Ingersoll Rand, Nabors Industries, Noble Drilling, Transocean and Tyco (Desai and Hines, 2002, p. 416). Stanley Works was also a member of the S&P 500 index and announced plans to invert⁷². However before the inversion was completed it decided to halt the transaction (Desai, 2009, p. 1285). These corporate inversions attracted considerable attention in business and general circulation media, and generated concerns about the possible loss of government tax revenue. In response, the U.S. Department of Treasury's Office of Tax Policy analyzed the motivations, methods, and implications of U.S. corporate inversions. Their report, Corporate Inversion Transactions: Tax Policy Implications was released in May, 2002.

The Office of Tax Policy report explained several legal approaches firms employed to effect corporate inversions. The report identified the potential tax consequence of corporate inversions, and also analyzed the non-tax issues firms considered before making an inversion decision. The report identified the tax advantages firms realized through moving their headquarters abroad, and offered a number of suggestions that would make inverting less attractive to U.S.-based MNEs.

In their September, 2002 article, Desai and Hines identified the causes of corporate inversions, and analyzed the consequences of these transactions, for firms and their investors. Their paper also explained both the process by which firms inverted, and advantages businesses realized as a result. In addition, Desai and Hines reached a number of significant conclusions. One was that

⁷² In all cases I have used the name of the firm at the time of the proposed corporate inversion, as cited by Desai and Hines, 2002, pp. 418-420. Several of the firms have changed their name since then.

favorable investor reaction to an inversion announcement could not be explained solely by a reduction in foreign tax obligations. They believed investors were also anticipating a reduction in taxes paid on U.S.-sourced income. Second, Desai and Hines concluded that inverting corporations were likely to have extensive international holdings. This suggested to Desai and Hines that avoiding U.S. taxes on foreign-sourced income was a key motivation for inverting. They also demonstrated that the stock market reacted more favorably to inversion announcements when the firms were highly leveraged. This indicated to Desai and Hines that the U.S. interest allocation rules, which shifted corporate interest expenses to non-U.S. subsidiaries, were also important factors motivating corporate inversions.

Seida and Wempe (2004) conducted a detailed study of twelve corporate inversions. They found the effective tax rate for inverted corporations decreased substantially after the inversion. While tax rates also decreased for firms that did not invert, inverted firms realized much steeper reductions in their worldwide tax rate than did firms that did not invert. Seida and Wempe also concluded the decrease in the inverted firms' tax rate could not be explained solely by a decrease in taxes paid on foreign earnings. They showed that several of these companies reduced taxes by leveraging their U.S. subsidiary with intercompany debt, and shifting interest income from the United States to other countries imposing lower tax rates. Their work confirmed Desai and Hines's suggestion that through corporate inversions firms also found ways to shift taxable income out of the United States. In addition, Seida and Wempe concluded that laws meant to control the leverage of U.S. based firms were sometimes ineffective at preventing earnings stripping activities.

Kane and Rock (2007) looked at corporate inversions from a global perspective, evaluating international tax policies in a number of locations, including the United States, Canada, the EU and Israel. They explained that there are two general approaches to determine where a firm is headquartered. One method is to determine where the parent company is legally incorporated, known as place of incorporation. The second approach focuses on more substantive issues, such as where key business decisions are made, and where the firm's assets and employees are

located. This is the firm's "real seat." Kane and Rock argued that real seat rules should be used to determine a firm's tax home, as place of incorporation rules made it too easy to relocate a firm solely through legal transactions, often to a site in which the MNE has little or no business presence. They also argued that U.S. tax laws, which tax worldwide income at high levels and use place of incorporation rules to determine a firm's tax home, made the U.S. vulnerable to corporate inversions.

Rubinger (2007) evaluated IRC §7874 and the related Treasury Regulations supporting that law. Like Kane and Rock, Rubinger noted that the U.S. used place of incorporation rules to determine a firm's tax home. He said most other countries, including the U.K., use real seat rules. Rubinger explained how these different approaches could be used to facilitate a tax-motivated inversion. He noted that IRC §7874 does not apply when a U.S.-based firm inverts to a country in which the firm has a substantial business presence. Thus if a U.S.-based MNE had significant business activities in the U.K., it could reincorporate there and avoid being taxed as a U.S.-headquartered enterprise. However the U.K. uses real seat rules to determine a MNE's corporate home. Thus the firm could also move the firm's management and control activities to a third country with even lower tax rates. The third country would be the real seat of corporate management, so it should be subject to that country's tax policies under U.K. rules and tax treaties. For example, if a U.S.-based MNE legally inverted to the U.K. and simultaneously moved its management and control activities to Hungary, it could take advantage of the low taxes in the latter country. Rubinger demonstrated that in spite of the complexities of IRC §7874, there are still ways firms can escape U.S. tax rules.

VanderWolk (2010) reviewed the legislative history of IRC §7874 and new, supporting Treasury Regulations that were released in June, 2009. VanderWolk analyzed both the new and prior Temporary Regulations. He showed the prior Treasury Regulations gave businesses better guidance than the new Treasury Regulations. The earlier regulations provided taxpayers with detailed examples to demonstrate how the regulations should be interpreted, and offered taxpayers a safe harbor to determine when they had a substantial business presence in another

country. In contrast, the new regulations deleted examples that provided taxpayers with such guidance, and removed the safe harbor. These actions will make it harder for taxpayers to know if they are complying with that law, and make §7874 more difficult to enforce. VanderWolk argued that the new regulations provide taxpayers with too little clarity.

Inversion Activity before and after IRC 7874

As mentioned, IRC 7874 appears to have significantly reduced corporate inversion activity. This can be shown by reviewing the history of inversion activity of members of the S&P 500 before and after the passage of IRC 7874, which became effective on March 4, 2003. Desai and Hines (2002) identified six members of the S&P 500 index that inverted between 1997 and 2002.

Those firms are shown below:

Corporate Inversions				
Firm	NYSE ticker symbol	Year of inversion	Original Corporate Home	New Corporate Home
Tyco	TYC	1997	United States	Bermuda
Transocean	RIG	1999	United States	Cayman Islands
Cooper Industries	CBE	2001	United States	Bermuda
Ingersoll-Rand	IR	2001	United States	Bermuda
Nabor Industries	NBR	2002	United States	Bermuda
Noble Drilling	NE	2002	United States	Cayman Islands

For this article, the author looked at firms that were in the S&P 500 index as of March 4, 2003, to determine how many of those firms moved their headquarters out of the United States between that date and December 27, 2010. Standard and Poor's provided a list of the five hundred members of that index as of March 4, 2003. The current corporate home for each firm was researched by reviewing each firm's most recent SEC filings. Over that time period, approximately 145 firms were removed from the index for a variety of reasons, such as an acquisition, going private, financial problems, or financial irregularities. Since March 4, 2003 no

member of the S&P 500 index that was headquartered in the United States has moved its headquarters abroad. This information supports the comments of VanderWolk, (2010, pp. 1-2), and Leitner and Glicklich (2009, p. 515) that IRC 7874 has been effective at preventing new corporate inversions of U.S. based firms, particularly publicly held enterprises⁷³.

For this paper the author also looked at the current corporate home for the six S&P 500 members that inverted prior to March 4, 2003, the date when IRC 7874 took effect. It is worthwhile noting that five of those six firms moved their corporate headquarters again. One of the six firms, Tyco, split into three firms in 2008, each of which has found a new headquarters location. Only one of the original six firms, Nabor Industries, has not relocated again. The following table shows the former and new headquarters of those businesses:

HQ Relocations of Inverted Corporations					
Firm	New firm name (if applicable)	Year of relocation	NYSE Ticker Symbol	Prior Corporate Headquarters	New Corporate Headquarters
Transocean	No change	2008	RIG	Cayman Islands	Switzerland ⁷⁴
Cooper Industries	No change	2009	CBE	Bermuda	Ireland ⁷⁵
Ingersoll Rand	No change	2009	IR	Bermuda	Ireland ⁷⁶
Noble Drilling.	Noble Corp. ⁷⁷	2009	NE	Cayman Islands	Switzerland ⁷⁸
Tyco	Tyco Electronics	2009	TEL	Bermuda	Switzerland ⁷⁹
Tyco	Tyco	2008	TYC	Bermuda	Switzerland ⁸⁰

⁷³ It should be noted that in 2007 Halliburton, a member of the S&P 500, announced it was opening a headquarters location in Dubai, United Arab Emirates. However according to its most recent 10-K, filed February 17, 2010, its primary headquarters is still in Houston, Texas, and the Dubai site is identified as a second headquarters. According to the 10-K it is still taxed as U.S. headquartered firm.

⁷⁴ See Transocean 10-K, filed February 24, 2010 page 5.

⁷⁵ See Cooper Industries 10-K, filed February 19, 2010, page 2.

⁷⁶ See Ingersoll Rand 10-K, filed February 26, 2010, page 5.

⁷⁷ Noble Corp. is the successor to Noble Drilling. See Noble Corporation 10-K, filed February 29, 2008, page 1.

⁷⁸ See Noble Corp. 10-K, filed February 26, 2010, page 2.

⁷⁹ See Tyco Electronics 10-K, filed November 10, 2010, page 58.

	International				
Tyco	Covidien	2010	COV	Bermuda	Ireland ⁸¹

Thus it appears Ireland and Switzerland are becoming favored sites for companies that inverted prior to the passage of IRC 7874. The motivations for these subsequent moves may merit further study. Nonetheless, it appears IRC 7874 was effective at preventing new U.S. corporate inversions, particularly for large, publicly held businesses. Six members of the S&P 500 index moved their headquarters out of the United States between 1997 and 2002. However no members of the S&P 500 index moved their headquarters out of the United States after March 4, 2003, the date when §7874 became effective.

U.S. Income Tax Rates

A number of factors contributed to the growth of U.S. corporate inversions during the late 1990's and early 2000's. Three primary causes were: 1) high U.S. corporate income tax rates; 2) the U.S. policy of taxing a MNE's worldwide income; and 3) the ease with which a corporate inversion could be accomplished. These three factors will be explained in turn.

According to their public statements, many firms inverted to reduce their corporate income tax rate. In the prior wave of corporate inversions (1997-2002), U.S.-headquartered firms found they could substantially reduce their income tax obligations by reincorporating abroad. Campbell (2004) reviewed published reports from a number of firms to identify the tax savings. She reported: "Ingersoll-Rand Co., Cooper Industries, and Tyco International are among the most significant expatriating nomads, expecting to save \$450 million dollars collectively in tax. Ingersoll-Rand Co. of New Jersey, one of Stanley Works' competitors, will save \$40 to \$60 million a year due to its reincorporation in Bermuda. As a result of its incorporation abroad, a spokesman for Cooper Industries, another of Stanley Works' competitors, said that it has saved about \$13 million in taxes during the last fiscal quarter ending June 30. Tyco International Ltd.

⁸⁰ See Tyco International 10-K, filed November 12, 2010 page 6.

⁸¹ See Covidien 10-K, filed November 22, 2010, page 1.

has estimated that it will save an estimated \$400 million in U.S. taxes as a result of its conversion to a Bermuda Corporation” (pp. 113-114). The firms did not articulate any operational benefits generated by an inversion; these were exclusively tax-motivated actions. As Kane and Rock (2007) wrote: “In the United States the issue has been brought to the fore by the occurrence of several high profile corporate ‘inversion’ transactions. Such transactions, which typically involve reincorporating the parent company of a US multinational offshore, are unabashedly all about tax reduction” (p. 1).

U.S.-based firms also argued the country’s high tax rates and policies put them at a competitive disadvantage with respect to their key competitors. Campbell (2004) wrote: “Stanley Works cited several reasons for its proposal to reincorporate outside the United States. The statement by Stanley Works noted that the tax treatment of foreign source income by the U.S. tax system does not enable U.S.-based multinational corporations to compete on a ‘level playing field’ in an increasingly globalized economy” (p. 108). Stanley Works argued this could make it difficult to price its products and services competitively, and grow sales and market share. However it should be noted Stanley Works ultimately decided to halt its inversion after unfavorable publicity, a close shareholder vote, and a threatened investigation into possible irregularities in that vote (Desai, 2009, p. 1285).

The corporate inversions prompted the Congress and tax officials to examine this activity. The Office of Tax Policy (2002) studied corporate inversions, and reported: “While the so-called corporate inversion transactions are not new, there has been a marked increase in the frequency, size and profile of the transactions” (p. 1). A primary concern was that more firms would invert, and this would decrease U.S. tax revenue. The report stated: “Inappropriate shifting of income from the U.S. companies in the corporate group to the foreign parent or its foreign subsidiaries represents an erosion of the U.S. corporate tax base” (p. 2). Additional corporate inversions would not only reduce tax revenue, they could also undermine confidence that the U.S. tax system is just. The report stated: “Moreover, exploitation of inappropriate income-shifting opportunities erodes confidence in the fairness of the tax system” (p. 2).

High U.S. corporate tax rates were an important force motivating corporate inversions. A 2005 Congressional Budget Office (CBO) study analyzed U.S. corporate income tax rates through 2003, the year IRC §7874 was enacted. It showed that beginning in the early 1990's U.S. corporate income tax rates were among the highest in the world (p. 26). The difference grew larger by 2003, the last year studied. In 2003 U.S. income tax rates were substantially higher than in other OECD countries. The CBO (2005) said: "Among all OECD countries in 2003, the United States' top statutory corporate tax rate was the third highest; it was also higher than the top statutory rates in approximately 90 percent of those countries. The United States' top rate of 39.3% was 6.3 percentage points higher than the median for all OECD countries..." (p. 14).

The CBO report notes that corporate income tax rates declined substantially between the mid-1980's and 2003. It says: "After large reductions in statutory corporate tax rates by Ireland, the United Kingdom, and the United States in the mid-1980's, other OECD countries also cut their rates, perhaps out of concern that they would lose investments or part of their tax base—for example when corporations moved their operations to a lower-tax country" (p. xi). The report demonstrated the U.S. had maintained relatively consistent tax rates, while those in other countries continued to decline. The report showed the U.S. was not keeping pace with falling worldwide corporate income tax rates.

Furthermore, worldwide corporate income tax rates have fallen since that report was prepared. In 2003 Germany's highest corporate income tax rate was 39.6%, Italy's was 38.3%, and Canada's was 35.6% (p. 22). According to OECD information these countries have enacted lower rates since 2003. Thus since 2003 U.S. corporate income tax rates have become even less competitive. The following table shows income tax rates in effect for 2010.⁸² U.S. tax rates in 2010 were the second highest in the world, exceeded only marginally by Japan's income tax rate.

⁸² The table below was retrieved from the OECD's web site on July 9, 2010. See <http://www.oecd.org/ctp/taxdatabase>. See Table II.1.

Corporate Income Tax Rates—2010

Country (1)	Central government corporate income tax rate (2)	Adjusted central government corporate income tax rate (3)	Sub-central government corporate income tax rate (4)	Combined corporate income tax rate-2010 (5) the sum of columns 3 + 4
Australia	30.00	30.00		30.00
Austria	25.00	25.00		25.00
Belgium	33.99	33.99		33.99
Canada	18.00	18.00	11.50	29.50
Chile	17.00	17.00		17.00
Czech Republic	19.00	19.00		19.00
Denmark	25.00	25.00		25.00
Finland	26.00	26.00		26.00
France	34.43	34.43		34.43
Germany	15.83	15.83	14.35	30.18
Greece	24.00	24.00		24.00
Hungary	19.00	19.00		19.00
Iceland	15.00	15.00		15.00
Ireland	12.50	12.50		12.50
Italy	27.50	27.50		27.50
Japan	30.00	27.99	11.55	39.54
Korea	22.00	22.00	2.20	24.20
Luxembourg	21.84	21.84	6.75	28.59
Mexico	30.00	30.00		30.00
Netherlands	25.50	25.50		25.50
Norway	30.00	30.00		30.00
Poland	19.00	19.00		19.00
Portugal	25.00	25.00	1.50	26.50
Slovak Republic	19.00	19.00		19.00
Spain	30.00	30.00		30.00
Sweden	26.30	26.30		26.30
Switzerland	8.50	6.70	14.47	21.17
Turkey	20.00	20.00		20.00
United Kingdom	28.00	28.00		28.00
United States	35.00	32.70	6.51	39.21
Average				25.84

In the previous table, the second column identifies the highest marginal tax rate imposed by the national government. Countries with progressive or graduated tax systems frequently impose lower income taxes upon firms or individuals with lower earnings; the above table identifies the maximum tax rate countries levy, which is generally levied upon firms with high earnings.

Some countries also levy income taxes to support local governments, or what the OECD calls sub-central governments, and may permit tax deductions or tax credits for these payments. The third column shows the federal income tax rate after deductions or credits for local government tax payments are calculated. The fourth column identifies the tax rate imposed by local governments. The fifth column is the key figure, as it compares the net corporate income tax rate in a country, after the impact of local corporate taxes is included. It is the sum of columns three and four. It shows that in 2010 the combined income tax rate in the United States was 39.21%, and was only exceeded by Japan's combined income tax rate of 39.54%. The U.S. rate was also 13.37 points above the OECD simple average of 25.84%. Also, while the U.S. corporate income tax rates will remain flat during 2011 and 2012, the U.S. federal income tax rate is scheduled to increase by another 4.6 points in 2013, the rate in effect during 2001.⁸³

High U.S. corporate income tax rates may motivate future inversions. In the late 1990's and early 2000's U.S. firms inverted to tax havens. If IRC §7874 makes it difficult to invert to a tax haven, substantial benefits can still be realized by relocating to other countries, if this can be accomplished. In addition, the United States taxes worldwide income, while most countries in the world tax only the income earned within their borders, to be described below.

Worldwide versus Territorial Tax Systems

As shown, U.S. income tax rates are significantly higher than those found in other countries. When a U.S.-based MNE earns profits in the United States, it is clear these income tax rates apply. However this raises a critical question: if a U.S. based MNE earns profits in another country, what country is entitled to tax those profits, and what tax rates should apply?

In general, countries take one of two approaches when taxing a MNE's earnings. Several countries tax all of a MNE's worldwide income, wherever it is earned. Most countries tax only

⁸³ See Public Law 111-312, signed into law on December 17, 2010

the profits earned within their borders, even if the MNE earns profits abroad. These two approaches are generally called “worldwide taxation” and “territorial taxation.” The U.S. enforces worldwide taxation policies.

Campbell (2004) writes: “The worldwide system is one where a domestic corporation must pay income tax to its home country on all income regardless of the source from which it was derived” (p. 99). Thus income earned in a foreign jurisdiction is subject to domestic taxation. Conceptually the U.S. taxes the worldwide income of its residents, however in practice there are limitations on this approach. Writing in 2002, Desai and Hines stated the United Kingdom, Italy, Japan, Norway and Greece also taxed worldwide income (p. 412).

Taxing a MNE’s worldwide income is theoretically justified on the grounds there are worldwide benefits to citizenship or residence, even when a business operates abroad. Doernberg (2008) writes: “With respect to taxation, a country may claim that all income earned by a citizen or a company incorporated in that country is subject to taxation because of the legal connection to that country” (p. 7). Because of that legal link, governments provide services to businesses operating abroad, such as overseas consulates, income tax treaties, and defense of property rights. In return for such benefits, individuals and businesses are expected to pay taxes to support the parent country’s government.

This approach was first tested in the United States Supreme Court case, *Cook v. Tait*.⁸⁴ In that decision, Justice McKenna wrote that worldwide taxation: “is based on the presumption that government by its very nature benefits the citizen and his property wherever found.” Isenbergh (2005) describes the Court opinion this way: “Thus, along with whatever protections and benefits it confers, U.S. citizenship brings worldwide income taxation with it as its price, a quid pro quo expressly invoked in *Cook v. Tait* as justifying worldwide taxation of U.S. citizens” (p. 19). However the United States is one of a small number of countries that claims worldwide taxing authority based on citizenship or residence (Doernberg, 2008, p. 7).

⁸⁴ *Cook v. Tait*, 265 U.S. 47 (1924)

Within the United States the central taxing issue has shifted from U.S. citizenship to residency. Isenbergh (2005) writes: “Individual residents of the United States, regardless of nationality, are exposed to U.S. tax on their worldwide incomes...Residence is therefore the first and most important touchstone of U.S. taxation for foreign nationals” (p. 20). Thus the worldwide tax system is frequently identified as a “residence-based” international tax system (Avi-Yonah, 2008, p. 2).

Determining an individual’s tax residence can sometimes be a complicated topic, as the IRS Code defines residency several ways, depending upon the issue at stake. But for businesses it is clearer. As Desai and Hines (2002) write: “From a legal standpoint, the definition of American tax residence is reasonably straightforward: a corporation is ‘American’ for tax purposes if it is incorporated in the United States. Firms choose their sites of incorporation, and, under current U.S. law, a company need not produce or sell anything in the country that serves as its tax home” (p. 410). Thus the central issue is where the parent firm is incorporated or chartered.⁸⁵ Whether the firm actually produces goods or services in that location is not pertinent in most cases, but this topic will be discussed in more detail shortly.

An alternative to worldwide taxation is levying taxes based only on income earned within a nation’s borders, or within its territory. This is frequently called a “territorial” tax system (Doernberg, 2008, p. 7). In a territorial system a country taxes only domestically earned income, and it exempts income earned in other jurisdictions. Doernberg (2008) writes “A territorial connection justifies the exercise of taxing jurisdiction because a taxpayer can be expected to share the costs of running a country which makes possible the production of income, its maintenance and investments, and its use through consumption” (pp. 7-8). In other words, when an individual or business earns income within a country’s borders, they should also pay for the government services that support commerce, such as necessary infrastructure and legal

⁸⁵ See IRC 7701(a)(4) for corporate place of incorporation rules

protection. Territorial policies are also called “source” tax systems, as the income is taxed only where it is earned, or sourced (Doernberg, 2008, p. 8). In general the income earned in other jurisdictions is exempt from domestic taxation. For this reason some call territorial tax policies “exemption” tax systems (Campbell, 2004, p. 98). The majority of the world’s nations tax income earned with their territory, and exempt the income earned in other locations, even if the parent firm is headquartered in that country (Desai and Hines, 2002, p. 412).

Conflicting worldwide and territorial tax policies create the potential to tax the same income twice. Suppose a business is headquartered in the United States and it opens a subsidiary in a second country. Both countries may claim the right to tax the MNE’s earnings in that second country. The U.S. taxes worldwide income, while the second country may tax all income earned within its borders. Double taxation would make it very difficult for firms to compete abroad, so most countries feel it is necessary to prevent this. In general countries with worldwide taxation policies have enacted two key limitations on these rules, to mitigate their impact and allow their firms to be more competitive. The first is to defer taxation of overseas profits until funds are transferred to the corporate home. The second is to allow a tax credit for taxes paid overseas.

In general, the U.S. and other countries defer taxation of overseas earnings until profits are repatriated to the home country. As a U.S. Office of Tax Policy (2000) paper stated, “Thus by organizing a foreign corporation a taxpayer can, absent certain rules, defer U.S. taxation on foreign income until it is repatriated, for example, as a dividend” (p. ix). Due to the time value of money, tax deferral can be an important benefit, particularly if the company defers domestic taxation for a sustained time period.

The second limitation permits businesses to reduce their domestic tax obligations when taxes are paid in another country. While the laws in the United States and other countries are quite complex, the general idea is that taxes paid to a foreign jurisdiction can be credited against the taxes due within the United States. As the Office of Tax Policy (2000) writes: “most

jurisdictions with worldwide systems, including the United States, allow a credit against domestic tax for foreign taxes imposed on income subject to domestic tax. Under a worldwide system with a foreign tax credit, an item of foreign income generally is not taxed domestically to the extent it is taxed abroad” (pp. x-xi).

In spite of deferral and foreign tax credits, worldwide tax policies can still increase the tax burden on a U.S.-headquartered business if the company repatriates funds to the United States. In those cases, a U.S.-based MNE has to pay taxes twice. First, the overseas CFC has to pay taxes to the local government based on its earnings. As U.S. income tax rates are the highest in the world, the parent firm frequently has to pay additional taxes to the U.S. government when it receives dividends from its CFCs. The U.S. parent can take a foreign tax credit for taxes paid abroad, which reduces the tax impact. But since U.S. tax rates exceed those found in most countries, additional taxes are still due the U.S. Treasury. Desai and Hines (2002) wrote: “One consequence of the U.S. tax system is that a corporation considered to be American for tax purposes will typically face greater tax obligations on its foreign income than would the same company if it were considered to be, say, German for tax purposes” (p. 410). And in addition to higher income taxes, worldwide tax policies add considerable complexity and cost to the process of determining tax obligations. Even the Office of Tax Policy (2002) acknowledges this complexity, commenting on certain U.S. international tax policies: “no country has rules for the immediate taxation of foreign-source income that are comparable to the U.S. rules in terms of breadth and complexity” (p. 28). Understanding the subtleties of foreign tax credit rules is generally considered challenging. Complying with the complexity of the U.S. tax system can be expensive, as firms must either hire or develop expensive expertise to prepare worldwide tax returns. These policies can also complicate cash management. U.S.-based MNEs may want to use cash earned and invested overseas, but as intercompany dividends can trigger additional tax liabilities, firms may be reluctant to access those funds.

As described, deferral and foreign tax credit rules can narrow several of the differences between worldwide and territorial taxation policies. In addition, some countries enforcing territorial

policies have enacted rules that tax passive income earned abroad. Avi-Yonah (2008) notes that the United States strengthened its worldwide tax system when it enacted Subpart F in 1962, which restricted deferral on passive income earned abroad. He says the U.S. gradually expanded the law's scope and strength through 1993 (p. 2). He argues the U.S. tax policies on passive income encouraged many countries with territorial-based tax policies to develop similar rules, and they began to tax interest income earned abroad. He writes: "As a result, the traditional dividing line between global and territorial jurisdictions became blurred, so that it could be said that most countries tax foreign passive income of their residents, but they do not tax currently foreign source active income (which was entitled to deferral or exemption)" (p. 2). Nonetheless, while worldwide and territorial tax systems may tax interest income similarly, there are major differences in how they tax active business income, so the distinction is still valid.

As the U.S. imposes high income tax rates and taxes worldwide income, U.S.-headquartered firms face large tax obligations. Desai and Hines (2002) described how the U.S. compares with other countries, stating that in such comparisons: "The United States tends to fare poorly in such calculations, since American companies owe taxes to the United States on their foreign incomes, while companies based in numerous other countries, including Germany, the Netherlands, Canada and France, not to mention most tax havens, owe little or no tax to their home governments on any foreign income" (p. 410). Moreover, since Desai and Hines wrote that a number of countries have lowered income tax rates, while the U.S.'s have remained flat. In addition, more countries are moving from worldwide to territorial-based tax systems. Thus the U.S. may be less competitive today than it was when IRC §7874 was enacted.

More countries are also moving towards territorial tax systems. As mentioned earlier, in 2002 Desai and Hines identified six countries that enforced worldwide tax systems. However according to VanderWolk (2010) two of those countries, the United Kingdom and Japan, are taking steps towards territorial policies (pp. 15-16). These actions can make their country's tax policies more competitive internationally. According to HMRC (2010), "An essential part of adapting a more territorial approach to the new rules will be moving from the current default

presumption that all activities that could have been undertaken in the UK would have been carried on here, had it not been for the tax advantages of the overseas location” (p. 4).

According to Neubig and Angus (2009) “Japan’s recent adoption of a territorial tax system as part of a broader reform reduces the tax burden on the foreign-source income of Japanese multinational corporations by exempting dividends from non-Japanese subsidiaries from Japanese tax” (p. 252). This is not to say that both countries have immediately adopted territorial tax systems; any such transition takes time. But both are taking steps in that direction.

Determining the MNE’s “Home”

In many cases it is clear where a MNE is headquartered. Businesses frequently begin operations in one country, file legal documents to incorporate there, and the owners and managers reside in that same nation. Successful firms often expand internationally, and to do this they generally form local subsidiaries to comply with legal requirements, such as determining their local tax obligations. However it is often clear the parent firm is headquartered in the first country, and the subsidiaries are CFCs managed by the parent firm. It is generally thought that Coca-Cola is an American firm, Novo Nordisk is Danish, Toyota is Japanese and Fiat is Italian, though they all have overseas subsidiaries. In each case the parent company needs to comply with international tax laws applicable in its “home” country.

However as the world has become more globalized, and large corporations operate in many countries, in some cases it may be more difficult to determine the MNE’s home. Perhaps two similarly sized companies from different countries decide to merge, as German-based Daimler and U.S.-based Chrysler did in the 1990s. The company may need to determine which one is the parent company, and which tax laws should govern the MNE. Or perhaps a company finds the focus of its work shifting from one country to another, necessitating the transfer of senior executives from one country to another. And in other cases a firm may incorporate a parent company in a new jurisdiction, as many U.S.-based firms did when they inverted to Caribbean tax havens. In such cases it may not be entirely clear what international tax policies should govern the MNE. There must be some way to determine which country’s international tax laws should apply.

Due to the tax implications, determining a parent company's tax home is a critical issue. Desai and Hines (2002) write: "Tax authorities are keenly interested in the nationality of their companies for the simple reason that, if a multinational corporation is Japanese for tax purposes, then its foreign profits are subject to taxation in Japan, while if the same corporation were American, then the United States would receive any taxes due on foreign profits" (p. 410). As mentioned, Japan has made changes to its laws since 2002, but the general point is still valid. Moreover, because the U.S. taxes worldwide income, a U.S.-based firm may owe taxes based on profits earned in Germany, for example. But because Germany exempts foreign income, a firm headquartered in Germany does not owe that government taxes for profits earned in the United States.⁸⁶

Countries generally use one of two methodologies to determine a firm's headquarters. In some countries the key issue is where the parent firm is legally incorporated. In other words, the location where the parent company's incorporation papers are filed is the corporate home.⁸⁷ In contrast, other countries seek to ascertain the focal point of the MNE's operations, such as where key business decisions are made, or where the largest segment of the firm's assets and employees are located. Under this second approach, for example, if the parent company's senior management works in a particular country, and the majority of its employees and its assets are located there, that country may be the parent firm's home. Again, as we investigate this topic in more detail, we will see that some countries use a combination of approaches to settle this issue, so the distinction between these methodologies is not clear in every case. Nonetheless, this is a useful distinction, as most countries use one of these two means to determine the MNE's corporate home.

Kane and Rock (2007) describe the difference this way: "Basically, in locating a corporation, a legal system can adopt either the 'place of incorporation' (POI) rules or some version of the 'real

⁸⁶ Desai and Hines (2002) identify the United States, the United Kingdom, Italy, Norway, Japan and Greece as countries that tax the worldwide income of residents, and that other countries generally exempt overseas income (p. 412).

⁸⁷ See IRC 7701(a)(4) which prescribes Place of Incorporation rules to define corporate residency in the U.S.

seat' (RS) rule. Under the POI rule, the corporation's location is determined by where it was incorporated, a purely formal criterion. Under the RS rule, a corporation's location depends upon some combination of factual elements, such as the location of the administrative headquarters or the location of the firm's center of gravity, as determined by the location of the employees and assets. The place of incorporation can bear on this determination but is not determinative" (p. 7). In short, real seat jurisdictions emphasize business substance, while place of incorporation countries focus on the legal form.

Not everyone believes place of incorporation rules are effective. Campbell (2004) writes: "In the U.S. corporate tax arena, no other basis for taxing corporations is considered, including nationality of owners, principal place of business, or where the primary management occurs. This opens up the U.S. system to the possibility of abuse by corporations that may take advantage of such an enormous loophole. Because a corporation is not more than a piece of paper that is granted separate legal status, this simple basis for taxing corporations has been criticized for having such large tax consequences depending solely upon which sovereign issued the document rather than any other criteria" (p. 102). As we will see later, U.S. laws have become a little more sophisticated since IRC §7874 was enacted, and in certain circumstances the U.S. uses "real seat" rules to reach a conclusion. But Campbell's description accurately describes U.S. laws before IRC §7874 became effective, and is still generally true.

As mentioned, real seat jurisdictions determine the firm's headquarters by emphasizing business substance and physical location. The issues may be where senior managers and employees work, where business decisions are made, and where the firm's assets reside. The criteria can differ from country to country. Most EU members rely upon "real seat" (RS) rules, though some countries may consider other issues. Kane and Rock (2007) write: "With respect to corporate tax, on the whole, EU member states apply an RS location rule. Again, however, there is blurring around the edges as we discuss in more detail" (p. 54). U.K. tax policies focus on where business decisions are made. Referring to U.K. rules, HMRC states: "it has long been recognised that the residence of a company is determined according to where its central

management and control is to be found.”⁸⁸ HMRC recently won a key case in which it argued a Dutch-incorporated firm was actually managed in the U.K., so it should be taxed there.⁸⁹

However, real seat rules are also imperfect, as creative firms may be able to work around them. In view of the tax benefits available, a company might move its management from one location to another solely to lower taxes. However this requires more effort than merely filing legal papers, as place of incorporation rules require. Real seat rules can also be criticized for being subjective. It may not always be easy to identify where key management and business decisions are made, particularly when managers are working in separate locations, and meet over the phone or through videoconferencing equipment. In practice, in many companies such decisions are sometimes made in a variety of locations, so it may be difficult to identify one site where these actions take place. And the site may change from year to year. So there may not always be a clear, unambiguous answer to the question: where is the real seat of company management? Taxpayers may also disagree with regulators, resulting in costly litigation. In contrast, a place of incorporation rule generally provides a clear, straightforward answer.

Determining a corporation’s home for tax and other purposes is likely to become increasingly difficult. Desai (2009) writes: “The archetypal multinational firm with a particular national identity is becoming obsolete as firms continue to maximize the opportunities created by global markets. National identities can mutate with remarkable ease and firms are unbundling critical headquarters functions and reallocating them worldwide” (pp. 1271-1272). In the future it may not be possible to determine with any certainty where a corporation’s “home” is.

International Tax Policies and Jurisdictions

As discussed, two important international tax issues are what businesses a country taxes, and what income it taxes. In other words, does a country use place of incorporation (POI) rules or real seat (RS) rules to determine who it taxes? And does it tax a firm’s worldwide income, or only the income earned within its territory?

⁸⁸ See INTM120150—Company Residence. Retrieved July 16, 2010 from <http://www.hmrc.gov.uk>

⁸⁹ See *Laerstate BV v HMRC* (2009) UKFTT 209 (TC).

Kane and Rock (2007) created a matrix to display the four tax alternatives. They write: “The conjunction of two possible locational rules (POI or RS) and two possible substantive regimes of taxation (worldwide or territorial) yields four possible combination of rules for any given jurisdiction” (p. 16). This can be a useful framework to display a country’s tax policies. It can also help us understand the choices a MNE faces if it considers moving from one jurisdiction to another. We can use this matrix as a starting point to demonstrate a country’s tax policies, but as we examine tax laws more closely, we will see that some countries use a combination of approaches.

Substantive Corporate Tax Law and Location
International Tax Policies ⁹⁰

Tax Locational Rule		Worldwide	Territorial
	Place of Incorporation (POI)	1 Worldwide/POI	2 Territorial/POI
	Real Seat (RS)	3 Worldwide/ RS	4 Territorial/RS

As mentioned, the U.S. taxes the worldwide income of its businesses. In general the United States uses place of incorporation rules to determine where a MNE is headquartered.⁹¹ Thus Kane and Rock (2007) placed the United States in the matrix’s first box (p. 18), as this reflects the general approach the U.S. uses to tax its MNEs. However, as we will see later, §7874 has introduced “real seat” rules in the United States in certain circumstances.

Kane and Rock argue the U.S. Worldwide/POI tax policies made it particularly vulnerable to corporate inversions. They write: “For example, during the recent wave of corporate migrations out of the United States, it was observed that the problem had been aggravated by the fact that the United States applies worldwide taxation and applies a POI locational rule. This

⁹⁰ Kane and Rock (2007) developed the matrix.
⁹¹ See IRC 7701(a)(4)

combination appears lethal because it makes tax migration easier (as compared to an RS rule) and it makes tax migration more beneficial (as compared to a territorial system)” (p. 25). In short, Kane and Rock felt the U.S. enforced unattractive policies that taxed worldwide income, which were exacerbated by high income tax rates. In addition, the POI rules made it relatively easy to avoid its rates and policies. If it is easy to escape complex and costly tax policies, why wouldn’t a firm find a new corporate home? A number of U.S. companies decided to do so in the late 1990’s and early 2000’s.

If a company wishes to escape Worldwide/POI tax policies, what policies will attract a firm? All other factors being equal, the second box (Territorial/POI) and the fourth box (Territorial/RS) are attractive. In both cases the MNE can escape costly and complex worldwide tax policies. Of course if those countries offer lower income tax rates, these locations become even more desirable. Unless it offers lower income tax rates, box three (Worldwide/ RS) is less attractive due to worldwide taxation policies.

How does a firm choose between box two (Territorial/POI) and box four (Territorial/RS) jurisdictions? It is easier, faster and cheaper to move to another POI jurisdiction than it is to move to a real seat jurisdiction. Reincorporation papers are filed in a new jurisdiction, the firm’s attorneys take a series of legal steps to declare a new corporate home, but the firm’s business operations are not affected. This can be accomplished quickly. Moving to another POI jurisdiction does not require moving senior management, employees or assets, which real seat jurisdictions may require. Moving people and a corporate headquarters to a real seat location can be disruptive, costly and time-consuming. A new headquarters has to be found and outfitted, and key employees may have to move. The firm might lose valuable employees in the transition. But moving to another POI jurisdiction requires no such changes. So moving to a box two jurisdiction (Territorial/POI) has significant advantages over moving to a box four country (Territorial/RS).

This is what U.S.-based MNEs did between 1997 and 2002. All of the inverting firms identified by Desai and Hines (2004) reincorporated in the Cayman Islands or Bermuda (pp. 418-420). Both countries determine tax residence through place of incorporation rules. According to the Office of Tax Policy's study (2002) of corporate inversions: "While the jurisdiction of incorporation is changed in an inversion transaction, there need not be any change in the location of the corporation's headquarters or its other business operations" (p. 15).

In addition, the Cayman Island and Bermuda do not tax overseas income. When describing those inversions the Office of Tax Policy (2002) wrote: "To the extent the ownership of foreign subsidiaries has been shifted out of the former U.S. group to the new foreign parent or a foreign subsidiary thereof, an inversion transaction eliminates the U.S. corporate-level taxation of these foreign operations. Accordingly, the significance of the foreign tax credit limitation (and the related rules concerning the allocation of expenses, including interest) to the inverted corporate group is reduced or eliminated, as foreign-source earnings of the corporate group will not be subject to U.S. tax" (p. 14). In summary, two popular destinations for corporate inversions between 1997 and 2002 were the Cayman Islands and Bermuda, countries that both offered territorial tax policies and place of incorporation rules.

Tax Consequences of Inversion Transactions

While the legal mechanics of a corporate inversion can differ from firm to firm, in general inversions are structured as either stock sales, asset sales, or a mixture of the two. They are generally taxable events. As Desai and Hines (2002) wrote: "U.S. law generally recognizes foreign inversions to be recognition events for capital gains purposes, meaning that taxpayers will incur capital gains tax liabilities for any previously unrecognized gains" (p. 416). The structure of the transaction determines how the gain is calculated and what party is taxed. But in any case, corporations considering an inversion need to weigh the immediate tax cost generated by the inversion against the longer term benefits of lower tax obligations and territorial taxation.

In all cases an inversion requires the incorporation of an entity in the new corporate home. In the first category, stock sales, the new foreign parent then acquires the shares of the U.S. firm, which was formerly the corporate parent. As Desai and Hines (2002) wrote: “In a taxable stock transfer, the new foreign parent company effectively exchanges its own shares for shares of the American company” (p. 416). At the conclusion of the transaction, the shareholders own shares in the new foreign parent, rather than the U.S. firm. According to the Office of Tax Policy: “The amount of taxable gain recognized is equal to the excess, if any, of the fair market value of the stock over the shareholder’s adjusted tax basis therein...” (p. 8). The shareholders of the corporation are taxed on any gain recognized as a consequence of the stock sale (p. 8).

In the second type of inversion, the new corporate parent acquires the assets of the U.S. entity. They are transferred between the U.S. entity and the new corporate parent at the fair market value of those assets. Again, this is a taxable event. As Desai and Hines write: “In an asset inversion, all of the assets of the U.S. entity are transferred to the foreign entity (which has no material assets) in exchange for stock in the foreign entity, and a taxable gain is realized on the excess of the fair market value over the U.S. entity’s cost basis in those assets” (p. 417). However in this case the tax obligation is paid by the firm itself, rather than the shareholders (Office of Tax Policy, 2002, p. 8). At the transaction’s conclusion, the shareholders own shares in the foreign entity.

To summarize, it is the shareholders who are taxed when the transaction is structured as an exchange of stock. Their taxable gain is the difference between the stock’s fair market value and its adjusted basis. However the firm itself is taxed on asset sales. Its gain is the difference between the fair market value of the assets and their basis. Firms evaluate the financial impact of these alternatives when they decide how to structure an inversion.

The third type of transaction is a mixture of a stock sale and an asset sale. These are frequently called “drop down” transactions. As the Office of Tax Policy (2002) stated: “The third category

of transaction that has been used to implement the reincorporation step involves elements of both stock and asset transfers. In this type of transaction, the U.S. parent transfers its assets to a new foreign corporation, and then a portion of those assets is contributed immediately to a U.S. subsidiary of the new foreign parent,” which is the origin of the “drop down” terminology. “To the extent that assets are contributed to a U.S. corporation, and therefore effectively remain in U.S. corporation solution, the result generally is the same as in a Stock Transaction...To the extent the foreign directly holds some of the assets of the former U.S. parent, the result generally is the same as in an Asset Transaction...” (p. 5). Since the transaction is both a stock sale and an asset sale, the gain is taxed both ways. Shareholders pay that portion of the gain related to the stock sale, determined by the difference between the shares’ value and their basis. The firm pays that portion of the gain triggered by the asset sales, and the gain is the difference between the fair market value of the assets and their cost basis (Office of Tax Policy, 2002, p. 9).

In addition to the transactions involving the former U.S. parent, in general foreign subsidiaries are transferred from the former U.S. parent to the new foreign parent, or one of its overseas subsidiaries (Office of Tax Policy, 2002, p. 6). Thus the U.S. parent is no longer responsible for paying taxes on the worldwide income of its overseas subsidiaries. This is one of the key benefits of these transactions. In addition, the Office of Tax Policy says many inversions have been accompanied by intercompany loans extended to the U.S. entity, which can shift a portion of the U.S. entity’s earnings to a low tax jurisdiction (p. 6).

To summarize, corporate inversions generally trigger a taxable gain which cannot be deferred. As Desai and Hines (2002) said: “The costs of inversions include not only the administrative costs of undertaking inversion transactions, but also the capital gains tax liabilities they entail” (p. 431). These costs need to be evaluated against the benefits of a corporate inversion, which include territorial taxation, lower income tax rates, and the opportunity to shift earnings from the U.S. entity through intercompany loans.

Non-tax Considerations

Prior to an inversion, firms also need to determine if there are any non-tax issues which they should consider. In general, inverting firms have not identified many issues which prevent them from structuring an inversion. However since that time the U.S. government has begun to use its purchasing power to discourage corporate inversions, so this should be considered in the future.

As mentioned, most corporate inversions had very little impact upon the day-to-day operations of a firm. As the Office of Tax Policy report stated: “the effect of such a transaction on the actual management and operation of the inverted firm is generally limited. While the jurisdiction of incorporation is changed in an inversion transaction, there need not be any change in the location of the corporation’s headquarters or its other business operations” (p. 15). Thus the potential impact upon business operations has not discouraged corporate inversions.

Corporate inversions appear to have had little impact upon firms’ access to capital markets, as many MNEs are listed on several stock exchanges. If anything, they may improve in certain circumstances. A firm that recently moved its corporate headquarters from the United States to the United Kingdom, Ensco, believes its relocation will improve its visibility in worldwide markets, and may increase its access to international investors (Ensco proxy statement/prospectus, 2009, p. 44).

Negative publicity may be one of the strongest arguments against corporate inversions. According to Godar, O’Connor, and Taylor (2005): “Politicians in the U.S. are labeling inversion, this movement of business incorporation locations to offshore tax haven, ‘unpatriotic’ and ‘immoral’” (p. 1). Business executives may be concerned about the impact upon their personal reputation, and businesses may fear impact upon the value of the firm’s brand.

However, since IRC §7874 was passed, firms considering an inversion will also need to consider an additional risk. Inverting firms may lose U.S. government contracts. Effective July 1, 2009 the Federal Government will not award contracts to inverted U.S. corporations.⁹² The U.S. government is using its purchasing power to discourage inversions. The law can be waived when it is in the national interest to do business with a particular firm. Nonetheless firms that do a significant portion of their business with the U.S. government will want to consider whether an inversion would reduce this revenue source.

Section 7874

IRC §7874 was passed as part of the American Jobs Creation Act of 2004.⁹³ Its primary objective was preserving U.S. tax revenue. The Senate Finance Committee's Report explained the law as follows: "The Committee believes that inversion transactions resulting in a minimal presence in a foreign country of incorporation are a means of avoiding U.S. tax and should be curtailed."⁹⁴ It is generally believed the law has been at successful at achieving its objective. Leitner and Glicklich (2009) said that since §7874 was enacted "the tide has slowed" (p. 515). VanderWolk (2010) takes a stronger position, saying the law "is widely believed to have had a severe chilling effect on inversions of publicly held corporations" (p. 1). As shown, between 1997 and 2002 six members of the S&P 500 index moved their corporate home out of the United States, but since IRC 7874 was passed, no members of that index have done so.

IRC §7874 does not prevent firms from inverting, and it may not be possible to enforce such a law. However the law either: 1) eliminates the tax benefits associated with inverting; or 2) increases the tax cost of a corporate inversion. In the first case §7874 ignores the inversion for tax purposes, and says the firm will continue to be taxed as a domestic entity. In the second case it recognizes the inversion, but may increase the tax bill that is triggered by the transaction. It does this by denying certain tax deductions that can reduce the taxable gain set in motion by the inversion.

⁹² See Omnibus Appropriations Act of 2009 (Public Law 111-8), Section 743 of Division D

⁹³ P.L. 108-357 (October 22, 2004).

⁹⁴ S. Rep. No. 108-192, 108th Cong., 1st Sess., at 142 (Nov. 7, 2003)

The law has three tests, all of which must be met for the law to apply. The first applies when all, or substantially all, of a firm is acquired. The test is met when “the entity completes after March 4, 2003, the direct or indirect acquisition of substantially all of the properties held directly or indirectly by a domestic corporation or substantially all of the properties constituting a trade or business of a domestic partnership.”⁹⁵ This section was prepared to cover the various legal techniques used to complete a corporate inversion. As mentioned, in some cases inversions were structured as stock purchases, in other cases as asset purchases, and some were a combination of the two. §7874 covers all of these events.

The second test compares the firm’s ownership before and after an inversion. If 80% or more of a firm’s shares were owned by the same shareholders before and after the inversion, the firm’s tax status does not change. Section 7874(a)(3) says in this case the inverted firm “is treated as a domestic entity.” In other words, the inversion will not be respected for tax purposes. Worldwide taxation and U.S. tax rates still apply. For other corporate law purposes the firm is now a foreign corporation, but for tax purposes it is still treated as a domestic entity.

However §7874 treats a firm as “surrogate foreign entity” when 60-80% of the firm’s shares are owned by the same shareholders before and after the inversion.⁹⁶ Leitner and Glicklich (2009) explained this impact, stating “Under §7874(a), the taxable income of an expatriated entity during the 10-year period beginning on the date of the acquisition ‘shall in no event be less than’ the inversion gain of the expatriated entity. In addition, the inversion gain cannot be offset by any credits to which an expatriated entity might otherwise be entitled” (pp. 515-516). In short, the taxable gain triggered by the inversion cannot be reduced by net operating losses and tax credits. VanderWolk (2010) says: “the phrase ‘surrogate foreign corporation’ has no meaning outside of section 7874” (p. 9). Thus the only impact of this section is to deny tax credits and deductions that could reduce the firm’s tax obligation generated by the inversion. Thus the exit tax for relocating abroad may increase, but the parent company will be taxed under the international tax laws applicable in its new corporate home.

⁹⁵ IRC §7874(a)(2)(B)(i)

⁹⁶ §7874(a)(2)(B)

Finally, if less than 60% of the shareholders are the same before and after the inversion, §7874 does not apply. In such situations the inverted firm is a foreign entity.

Determining an inverting firm's tax status based on the number of shares that change hands seems like a curious approach. Why should a firm's tax status be determined by the number of shares that transfer ownership? VanderWolk (2010) says Congress intended to permit corporate restructurings not motivated primarily by tax objectives (pp. 4-7). If there was little or no change in the ownership of a firm, this indicated the transaction was structured only to avoid the U.S. tax system. But if there was a substantial change in the ownership of a firm, this suggested that that "transactions would have sufficient non-tax effect to justify being respected for US tax purposes" (p. 4). Still, one wonders whether this was the most effective way to determine if a transaction had non-tax purposes. And it is not entirely clear why the lines were drawn at 60% and 80% continuity of ownership. If 50-60% of shares remain in the same hands §7874 does not apply, but over half the shares are still owned by the same parties.

The third test is whether the inverted firm has a substantial business presence in its new corporate home. If the firm does not have such a presence in that location, §7874 applies. The purpose is to prevent inversions to countries in which the MNE conducts minimal business, such as Caribbean tax havens. This test compares the volume of work performed in the new corporate home to that done by the entire worldwide enterprise, or what §7874 calls "the expanded affiliate group (EAG)." Section 7874 applies if "after the acquisition the expanded affiliate group which includes the entity does not have substantial business activities in the foreign country in which, or under the laws of which, the entity is created or organized, when compared to the total business activities of the expanded affiliate group."⁹⁷ If the firm does have a substantial business presence there, the inversion is respected.

⁹⁷ 7874(a)(2)(B)(iii)

However §7874 does not explain what constitutes a “substantial business presence.” The subsequent Treasury Regulations provide more detail. The substantial business presence test also introduces real seat rules into U.S. tax laws. But they only apply as part of §7874. Place of incorporation rules are still the standard used to determine whether firms are taxed as U.S. entities; no substantial business presence is necessary. But to escape U.S. tax rules a firm needs to demonstrate it has a substantial business presence in that new corporate home. Thus a firm that incorporates in the United States will be taxed as a U.S. entity, even if no business is conducted here. If the same firm wants to flee the U.S. tax system, it has to demonstrate it has a substantial business presence in another location. This appears inconsistent.

One other section is noteworthy. Section 7874(c)(2)(B) disregards “stock of such foreign corporation which is sold in a public offering.” This section was drafted to prevent firms from simultaneously inverting and going public. In most public offerings the ownership of a firm changes substantially, as privately held shares are sold to the public. Without this section many U.S.-based firms might expatriate as part of an Initial Public Offering (IPO), since substantial ownership changes would allow the firm to escape §7874.

VanderWolk (2010) summarized §7874 this way: “The new law effectively negated the tax benefits of inversions into tax haven parent corporations where the ownership of the group was not significantly affected by the restructuring. If, on the other hand, there was a significant change in ownership, and if the change was not due to a public offering of shares in the foreign corporation, the new law sought only to impose US tax on gains accrued up to the date of expatriation, without offset by foreign tax credits or net operating loss carryovers. If the group had substantial business activities in the foreign corporation’s country of incorporation, the new law would not apply” (p. 1). It should also be noted VanderWolk is critical of the law, stating:

“Section 7874 is the most extreme of the US international tax rules aimed at preserving residence-based taxation of foreign-source earnings of US multinationals. The deemed domestication of a foreign corporation not managed or controlled in the United States, under the 80-percent ownership change test of section 7874, is a radical assertion of tax jurisdiction in

context of international tax norms” (p. 16). One can also question the logic underlying §7874, particularly the 80-percent and 60-percent tests. In many ways real seat rules seem more logical; the country that taxes the MNE parent does so because that is where business decisions are made, where senior executives work, or where a large portion of the firm’s assets and employees reside.

Treasury Regulations explain how the IRS interprets the substantial business presence test. Two sets of Temporary Regulations were drafted on this topic. The first regulations were in effect until June, 2009, and they included detailed examples to explain how the IRS interprets the law. They also included a safe harbor. The safe harbor included tests to determine whether the substantial business presence test is met. However they were replaced in June of 2009 with new Temporary Regulations, which do not provide a safe harbor nor do they provide examples to explain how the IRS interprets §7874.

Both prior and current Temporary Regulations identify five factors to be considered when determining whether businesses have a substantial business presence in their new corporate home. Those factors are: 1) the historical conduct of continuous business activities in that country prior to the inversion; 2) the presence of operational activities in that country, including property ownership, performance of services, and sales by EAG members; 3) the presence of substantial managerial activities by EAG employees in that country; 4) a substantial degree of ownership by investors residing in that country; and 5) strategic factors including “business activities in the foreign country that are material to the achievement of the EAG’s overall business objectives.”⁹⁸ However it is unclear how important each factor is. Both sets of regulations state: “The presence of absence of any factor, or of a particular number of factors, is not determinative. Moreover, the weight given to any factor (whether or not set forth below) depends on a particular case.”⁹⁹ The facts and circumstances in each case need to be evaluated separately.

⁹⁸ Regs. §1.7874-2T(d)(1)(ii)

⁹⁹ Ibid

As mentioned, the prior regulations provided taxpayers with a safe harbor. They stated taxpayers met the substantial business presence when all three measures were met. The prior regulations said if “after the acquisition, the group employees based in the foreign country account for at least 10 percent (by headcount and compensation) of total group employees,”¹⁰⁰ that measure is met. If “the total value of group assets located in the foreign country is at least 10 percent of the total value of all group assets”¹⁰¹ the second measure is reached. And when “the group sales made in the foreign country accounted for at least 10 percent of total group sales”¹⁰² the third measure is attained. If the firm met or exceeded all three measures it had a substantial business presence in that location, and IRC §7874 did not apply. But the Treasury Department replaced those regulations and eliminated the safe harbor in 2009, making it very difficult for taxpayers to know if the IRS will challenge a firm’s contention it has a substantial business presence in a new corporate home. Since the substantial business presence test has not yet been litigated, businesses cannot look to court decisions, either.

Leitner and Glicklich (2009) wrote: “This safe harbor was removed from the new temporary regulations. According to the Preamble, the IRS and Treasury Department were concerned that the safe harbor might apply to certain transactions that are inconsistent with the purposes of §7874. For similar reasons, the examples in the former temporary regulations that illustrated the general application of the facts-and-circumstances test were also eliminated. Whether the IRS believes that the thresholds in the safe harbor and the facts of the examples were simply too generous—or whether the IRS prefers to retain a level of subjectivity and uncertainty to deter taxpayers from relying on the substantiality exception—is not entirely clear. However, a clue may exist where the Preamble notes that, in addition to the elimination of the safe harbor and examples, the question is whether the substantial business activities condition is satisfied will continue to be an area with respect to which the IRS will ordinarily not rule. The implication is that the IRS is intentionally making it more difficult for taxpayers to rely on the substantiality exception” (p. 521). Thus the IRS will not give taxpayers advance guidance on the topic; businesses have to invert first, and then learn if the IRS will challenge the firm’s position.

¹⁰⁰ Prior Temporary Regs. §1.7874-2T(d)(2)(ii)

¹⁰¹ Prior Temporary Regs. §1.7874-2T(d)(2)(iii)

¹⁰² Prior Temporary Regs. §1.7874-2T(d)(2)(iv)

In some ways one can understand why the IRS dropped the safe harbor. It had flaws. Suppose a MNE had 89% of its employees, assets and sales in the United States, and 11% in Canada. Under the safe harbor it would have a substantial business presence in Canada, and thus could choose to be taxed there. But in that situation it seems that the corporation's "real seat" would be the United States, if those rules applied.

VanderWolk (2010) had further criticisms. He wrote: "For a group that conducts significant business activities in many different countries, the business-activities test would be impossible to satisfy if 'substantial' were interpreted to mean 'at least 50 percent,' or even 'at least 20 percent.'" It is likely that many global businesses are spread over a large number of countries, such that no single country accounts for more than a single-digit percentage of the global business. Did Congress intend to create a condition that could not be met, in practice, in some cases? There is no evidence in the legislative history that this result was intended?" (pp. 11-12).

Furthermore, the new regulations are vague. VanderWolk (2010) wrote: "The inability to know the tax consequences of a major transaction is a real problem, which only the IRS and Treasury (or Congress) can solve. The sooner the IRS and Treasury can produce new guidance regarding the level of business activity in the foreign country or incorporation that will be considered 'substantial' when compared to the total business activities of the group, the better for all concerned" (pp. 17-18). However it seems unlikely such guidance will be forthcoming soon. The new regulations were released last year and they replaced more specific regulations that had been in effect from 2006-2009. The lack of clarity in the new regulations appears to be a conscious strategy that reflects the Obama Administration's intention to limit inversion activity.

VanderWolk (2010) says this puts taxpayers in a difficult position, since they cannot be assured they comply with the substantial business presence test. He writes, "In contrast to the bright line test of 80 percent ownership in section §7874(b), the business-activities test in section

§7874(a)(2)(B)(iii) draws a very fuzzy line, the crossing of which has enormous consequences...Unfortunately, the adjective ‘substantial’ is ambiguous” (p. 11).

The Ensco Re-domiciliation

Despite the added confusion created by the new Treasury Regulations, earlier in 2010 the oil drilling firm Ensco moved its corporate headquarters from the United States to the United Kingdom. The Ensco action illustrates issues other U.S.-based firms might encounter in the future as they seek to escape high income tax rates and worldwide income tax policies. The issues raised by this headquarters relocation may be faced by other firms in the future, so Ensco’s actions serve as a useful case study.

Ensco is a drilling services firm that began operations in Texas in 1975. It specializes in deep water drilling, an activity that has become more visible as oil exploration has shifted from coastal to deep ocean waters. Ensco provides drilling services to oil companies around the world. During the fiscal year ending December 31, 2009 its revenue was approximately \$1.9 billion, and its net income was \$779 million.¹⁰³ It employees approximately 3,700 people, and in December, 2010 its market capitalization was \$6-\$7 billion.

In November, 2009 the firm announced its intention to “re-domicile” its corporate headquarters from the United States to England. On December 22, 2009 its shareholders met in Texas to approve this action. As of March, 2010 Ensco is headquartered in London, England.

Ensco consistently says it has re-domiciled, and does not use the words “corporate inversion” to describe its actions. Re-domiciliation can be distinguished from a corporate inversion in several important ways. While a corporate inversion is generally a tax strategy that has little impact upon a firm’s operating activities, a re-domiciliation includes moving corporate offices and personnel move to a new site, where the worldwide enterprise can be managed more effectively. For example, Ensco announced it was moving key activities and officers to the United Kingdom

¹⁰³ See 10-K for Ensco date February 25, 2010 at <http://www.edgar.com>

to improve access to customers and business operations. While a corporate inversion may be done only for tax purposes, a re-domiciliation should improve both operating performance and a firm's tax rate. Furthermore, in corporate inversions firms generally reincorporate to a tax haven, while in a re-domiciliation a firm moves its corporate home to a country in which it has a substantial business presence, or where the MNE is managed. This is not necessarily a tax haven. This paper proposes the following are key differences between prior corporate inversions and a re-domiciliation:

Corporate Inversions and Re-domiciliation

	Corporate Inversion	Re-domiciliation
Stated purpose	Reduce income tax rate	Improved management and control of MNE, and reduce income tax rate
Relevant rules to determine MNE corporate home	Place of incorporation rules determine MNE home	Real seat rules determine MNE home
Impact on operations	Negligible—no significant impact upon how firm is managed	Firm relocates headquarters operations to improve business management
New corporate home	Tax haven jurisdictions such as Bermuda and Cayman Islands	Country in which firm has significant business activities; not necessarily a tax haven

As previously mentioned, IRC §7874 applies when three tests are met. The third is the substantial business presence test. Expatriating firms must be taxed as domestic entities when the first two tests are realized, and “the expanded affiliate group which includes the entity does not have substantial business activities in the foreign country in which, or under the law of which, the entity is created or organized...”¹⁰⁴ Ensco argues it has a substantial business presence in the U.K. and thus it is not subject to §7874.

Ensco emphasized that it was moving management and control of the firm from the United States to the U.K. Its proxy statement/prospectus says: “Our Board of Directors expects that the

¹⁰⁴ IRC §7874(a)(2)(B)(iii)

reorganization and relocation of our principal executive offices, including most of our senior executive officers and other key decision makers, to the U.K., would, among other anticipated benefits: enhance management efficiencies resulting from the U.K. time zone overlap with geographies where we operate, improve access to key customers located in the U.K. or Western Europe or who routinely travel to the U.K., enhance our access to European institutional investors, improve the general customer and investor perception we are an international driller...”¹⁰⁵ In short, senior executives to London will manage the firm more effectively when they reside in the United Kingdom, since they will be closer to key customers, investors and operations. As mentioned previously, U.K. tax laws state “that the residence of a company is determined according to where its central management and control is to be found.”¹⁰⁶ This is similar to one of the substantial business presence factors in U.S. Treasury Regulations. The third factor in those regulations states the IRS will evaluate: “The performance in the foreign country of substantial managerial activities by the EAG members’ officers and employees who are based in the foreign country.”¹⁰⁷

Because it intends to be taxed under U.K. international laws, Ensco believes its tax rate will decrease. Tax treaties are also an important consideration. The proxy statement/prospectus says that re-domiciling its headquarters to London will “allow us to take advantage of the U.K.’s developed and favorable tax regime and extensive treaty network, and allow us to potentially achieve a global effective tax rate comparable to that of some of our global competitors...”¹⁰⁸ While Ensco was not relocating exclusively for tax reasons, there were still tax advantages to moving to the U.K. Ensco also contended that U.S. worldwide tax policies and rates made it more difficult for them to compete effectively, a claim made in the prior era of corporate inversions.

¹⁰⁵ See Ensco’s letter to its stockholders, written by Chairman of the Board Daniel W. Rabun, dated November 20, 2009, included its merger prospectus. Downloaded July 19, 2010 from http://www.enscous.com/Theme/Ensco/files/docs_financial/Ensco%20Special_Proxy_Statement.pdf

¹⁰⁶ See INTM120150—Company Residence

¹⁰⁷ IRC§7874(a)(2)(C)

¹⁰⁸ Ibid

Ensco was careful to distinguish its actions from prior corporate inversions, which generated adverse publicity. Referring to prior transactions they wrote: “In most cases, those corporations expatriated to tax haven jurisdictions in which the applicable U.S. multinational corporation had no (or minimal) historic business activities” (p. 40). Ensco was moving to a country in which it had a substantial, historic business presence, and where it could manage its operations more effectively. Furthermore, while the U.K.’s 28% tax rate is substantially lower than the U.S. rate, it is not considered a tax haven.

Ensco’s prospectus/proxy statement explains the tax advantages of re-domiciling to England. It says: “We believe that the merger should improve our ability to maintain a competitive worldwide effective tax rate because the U.K. corporate tax rate is lower than the U.S. corporate tax rate and because the U.K. has implemented a dividend exemption system that generally does not tax subject non-U.K. earnings to U.K. tax when such earnings are repatriated to the U.K. in the form of dividends from non-U.K. subsidiaries. In addition, the U.K. Government is consulting on reform of the U.K. controlled foreign company rules (under which, in some circumstances, low-taxed profits of foreign subsidiaries of the U.K. companies may be taxed in the U.K.) with a view to moving towards a more territorial system of taxing foreign profits of U.K. companies” (p. 23). Ensco is attracted to the U.K.’s lower tax rate and the steps it has taken towards a territorial tax system. In the Kane and Rock model on page 22, the United Kingdom is moving from box three (Worldwide/RS) to box four (Territorial/RS). And Ensco is moving from being taxed under box one policies (Worldwide/POI) to box four (Territorial/RS), using the substantial business presence test in IRC §7874 to achieve that objective.

To escape §7874, Ensco’s proxy statement/prospectus specifically evaluates each of the five factors identified in the Treasury Regulations’ substantial business presence test, and explains how they support Ensco’s contention it has a substantial business presence in the U.K. One factor concerns the firm’s historical presence in that country. Its proxy statement says: “However, Ensco UK is a company formed under English law, and Ensco Delaware has, continuous and substantial business activities in the U.K. as a result of its longstanding North

Sea drilling activities and management and control over the Europe and Africa Business Unit, headquartered in Aberdeen, Scotland. We therefore believe Ensco UK should not be treated as a U.S. corporation for U.S. federal income tax purposes under Section 7874” (p. 23). It also notes that it began drilling activities in the United Kingdom’s North Sea in 1993, and had a local headquarters in Aberdeen, Scotland since 1994.

The firm argues it has substantial managerial activities in the United Kingdom, another factor identified in U.S. Treasury Regulations. Their proxy statement/prospectus says: “After relocating to Aberdeen, Scotland in 1994, the U.K. headquarters have served an increasingly important managerial role within the Ensco Delaware expanded affiliate group. The Aberdeen facility is the headquarters for the Europe and Africa Business Unit, which is one of four business units...” (p. 43). The General Manager of that division and seven of his/her managers all live and work in Scotland. Furthermore, Ensco expects further growth in the U.K., stating: “For the strategic business reasons discussed above, management in the U.K. has grown. More importantly, for the same reasons, the Company expects the long-term historic growth of management in the U.K. to continue” (p. 43). Ensco also says the firm’s senior managers will move to the U.K., effectively shifting the worldwide enterprise’s management to the U.K. Thus it will comply with the U.K.’s international tax laws, which emphasize management and control when determining a MNE’s corporate home.

Another factor to be considered is whether there is “A substantial degree of ownership of the EAG by investors resident in the foreign country.”¹⁰⁹ The firm acknowledges that few of its current investors are U.K. residents, but they hope to change this. Their proxy statement/prospectus states: “The enhanced relationships with potential U.K. and European investors are likely to result in an expanded U.K. and European Union shareholder base. However it is unlikely that U.K. residents will comprise a substantial portion of Ensco’s shareholder base in the near term” (p. 44).

¹⁰⁹ Regs. §1.7874-2T(d)(ii)(D)

Current and prior Treasury Regulations also evaluate whether the firm has strategic reasons for moving abroad. The Treasury Regulation says one factor to be evaluated is: “The existence of business activities in the foreign country that are material to the achievement of the EAG’s overall business objectives.”¹¹⁰ Ensco says it is re-domiciling for strategic reasons. While they began in the United States, they are growing more rapidly in international markets, and they want to be perceived as a global provider of deep water drilling services. To substantiate this, Ensco explains how it began a U.S. firm, with an initial focus on drilling activities in the United States and the Gulf of Mexico. However, since that time it has grown more rapidly in international markets. They write: “Specifically, 94 percent of the proven worldwide oil reserves and 95 percent of proven worldwide gas reserves are located in the Foreign Drilling Markets. By contrast, only 6 percent of the proven worldwide reserves and only 5 percent of the proven worldwide gas reserves are located in the U.S.” (p. 42). The U.K. headquarters gives senior management easier access to operations in the North Sea, Mediterranean, Africa and other sites. They write: “Consistent with these global trends, we expect that we will derive approximately 86 percent of our 2009 gross revenues from our operations in the Foreign Drilling Markets” (p. 42). Ensco says its goal is to expand internationally, and the U.K. location is a better site to achieve that objective (p. 43). In short, they believe the U.K. is a better strategic location than the United States for a worldwide drilling services firm.

The regulation’s fifth factor is whether the firm has substantial operational activities in its new corporate home. Specific items to be evaluated include property in that country, the “performance of services by individuals in the foreign country which is owned by members of the EAG,”¹¹¹ and sales made in that country by members of the EAG. As discussed, under the safe harbor, if 10% of the worldwide enterprise’s assets, employees and sales are located in the new corporate home, the “EAG will be considered to have substantial business activities”¹¹² in that location.

¹¹⁰ Regs. §1.7874-2T(d)(ii)(E)

¹¹¹ Regs. §1.7874-2T(d)(ii)(B)(2)

¹¹² Prior Regs. §1.7874-2T(d)(iii)(2)

Enesco says that under the former Treasury Regulations it met each of the safe harbor elements. Enesco's proxy statement/prospectus states: "The ratios of the ENSCO Delaware expanded affiliate group's assets, employees and revenues in the U.K. compared to its worldwide assets, employees, and revenues exceeded the former 10 percent 'safe harbor' contained in the 2006 Regulations for each calendar year from 2005 through 2008 and are projected to exceed the former 'safe harbor' in 2009. The 2009 Regulations contain no 'safe harbor' or example to illustrate the application of the relevant factors to determine whether substantial business activities exist. There is no judicial or administrative guidance on the meaning of 'substantial business activities' for purposes of Section 7874" (p. 41). Thus Enesco argues it would have had a safe harbor under the prior regulations. Enesco appears to believe it has a solid case. The firm's management determined it was strong enough that they proposed the re-domiciliation to its shareholders, though the regulations removed the safe harbor. The shareholders supported the move, and the firm is now headquartered in London.

However Enesco cannot be entirely sure its move will not be challenged by the IRS. Thus it acknowledges in its proxy statement/prospectus: "Notwithstanding the foregoing, it is possible that the IRS may assert and ultimately establish that Enesco UK should be treated as a U.S. corporation for U.S. federal income tax purposes, under Section 7874 of the Code" (p. 46). If this happened "we would become involved in a tax controversy with the IRS regarding possible additional U.S. tax liability" (p. 23). The firm had no way to resolve this issue prior to re-domiciling, and still took that action.

Options Available to U.S. Firms

Given the high cost and complexity of U.S. international tax policies, some firms may want to consider alternatives to American tax laws. While other countries seek to attract MNEs through tax-friendly policies, the U.S. is trying to keep them from fleeing, at least for tax purposes. What alternatives might American businesses consider? Following are options firms and investors might evaluate, depending upon their circumstances. In the examples below, I have tried to emphasize the most likely scenarios, rather than identify every option a firm could consider, however improbable.

Option one: Incorporate abroad from the outset

If a firm has not yet incorporated it may want to consider doing so in a tax-friendly jurisdiction at inception. The U.S. still relies primarily upon place of incorporation rules to determine what businesses it should tax. There is nothing that prevents a firm from incorporating abroad during its start-up phase. Thus in the Kane and Rock model the firm could start operation in the second box (Territorial/POI). The firm could still be managed and directed within the United States, but its worldwide tax policies would not apply.

The parent company could then form a U.S. subsidiary to conduct business here. The firm is still subject to high taxes on U.S.-sourced earnings, but it can avoid the cost and complexity of worldwide taxation. As mentioned, it may also be possible to extend loans from the overseas parent to the U.S. subsidiary, and strip a portion of its earnings from the United States to a low-tax jurisdiction.

The Office of Tax Policy (2002) recognized new businesses may not choose to incorporate in the U.S. stating: “As we formulate a response, however, we must not lose sight of the fact that an inversion is not the only route to accomplishing this type of reduction in taxes. A U.S.-based start-up venture may incorporate overseas at the outset” (p. 2). The U.S. tax system is costly and burdensome, and place of incorporation rules make it easy to incorporate abroad.

Testifying before Congress in 1999, Intel’s Vice President of Tax, Robert Perlman, said this is what he would advise. Perlman said: “if I had known at Intel’s founding (over thirty years ago) what I know today about international tax rules, I would have advised the parent company be established outside the U.S. This reflects the reality that our Tax Code competitively disadvantages multinationals simply because the parent is a U.S. corporation.”¹¹³

¹¹³ Perlman, R. (1999). International Tax Issues Relating to Globalization: Hearing before the S. Comm. on Finance, 106th Congress 1.

Since that time the disparity between U.S. tax policies and those in other countries has grown. Today the U.S. tax rate is one of the world's highest, and fewer countries are enforcing policies that tax worldwide income.

Well-funded, high technology start-ups are often backed by sophisticated investors with international experience, and the advantages of incorporating abroad from inception are known. As the Office of Tax Policy noted: "A start-up venture that contemplates both U.S. and foreign operations must choose a location for its corporate parent. While the natural choice for a U.S.-based venture may be a U.S. parent corporation, that often will not be the most tax efficient choice. By forming initially through a foreign parent corporation, the venture can enjoy the same tax savings as would be available through a subsequent inversion transaction" (p. 18-19). When this was written inversions were easier to accomplish than today, so the motivation to incorporate overseas from the start today is even stronger. At some point it seems possible that incorporating in the U.S. will not be the "natural choice," as tax attorneys and CPAs advise clients to incorporate abroad from day one. Such actions may not attract the same attention as corporate inversions by well-established, household names. However in the long run it can be more damaging, as the U.S. economy and its tax base rely upon the success of new business ventures.

Option two: if you are merging with an overseas company, select that location as your corporate home

As international trade and investment grow, cross-border mergers may become more frequent. If tax policies continue to levy high tax rates and complex tax rules upon U.S.-headquartered firms, when firms merge or are acquired they may want to identify the overseas location as the corporate headquarters. The Office of Tax Policy also acknowledged this was a threat, stating: "An existing U.S. group may be the subject of a takeover bid, either friendly or hostile, from a foreign-based company" (p. 2). Their report said this could have a negative impact upon the U.S. economy in the long-run, stating: "Moreover, these transactions can have significant adverse effect on the U.S. economy in the long term, as decisions affecting the future location of new investment, operations and facilities, and employment opportunities are made by what is a foreign-based company rather than a U.S.-based company" (p.2).

This is not be just a theoretical concern. There is evidence this has happened. According to Avi-Yonah (2008): “When Daimler bought Chrysler in 1998 to form Daimler Chrysler AG, Juergen Schrempf, the CEO of Daimler/Chrysler, testified before the US Senate Finance Committee that Subpart F was a major reason that the combined company was German and not American” (p. 6). While Schrempf said this was a significant factor, it should be noted that Avi-Yonah questioned this, and thought the German government and unions may have had a larger influence. Nonetheless, Schrempf’s comments indicate that taxes can play a role in such decisions. And Avi-Yonah also commented: “However, Schrempf addressed a broader phenomenon, which is that lawmakers are reasonably concerned about the impact of CFC rules on the decision where to incorporate MNEs. This can be shown for the US by the trend in inversion transactions, in which US MNEs reincorporated in Bermuda in part to avoid Subpart F. The trend was stopped by legislation in 2004, but the competitiveness issue continues” (p. 6). But the Ensco re-domiciliation indicates there are ways for some firms to work around IRC 7874.

Depending upon the location of the acquiring firm, the merged company could be in any of the four boxes in the Kane and Rock table. However since most countries apply territorial tax policies, the new firm is likely to be in the second or fourth box (Territorial/POI or Territorial/RS). In this event it may be an opportune time to transfer CFCs to the new corporate parent, and escape worldwide taxation policies of those entities. In addition, even if the acquiring firm is in either the first box (WW/POI) or the third box (WW/RS) it may make sense to designate that firm as the parent, due to the high U.S. income tax rate.

Option three: find new investors as part of a corporate inversion

As mentioned earlier, the U.S. laws governing corporate inversions are curious, in that a firm’s tax status can change when the firm attracts new investors. If less than 20% of the firm’s shares change hands as part of a corporate inversion, the firm continues to be taxed as a domestic entity. If 20-40% of the shares change hands, the cost of expatriation can increase, as the firm cannot use NOLs and tax credits to reduce the exit tax. And if more than 40% of the shares change

hands, IRC 7874 does not apply. But in any case, if more than 20% of a firm's shares change hands, the firm is no longer taxed as a domestic entity.

There may be occasions when a firm seeks new investors and additional capital. This may be an opportune time to invert. Both new and existing shareholders benefit from a lower tax rate, as long as the firm is profitable. As VanderWolk (2010) writes: "For some group owners, the effective transfer of more than 20 percent of their equity interest in the group to new investors via a private placement of FC [Foreign Corporation] stock, and the US tax cost of the related inversion, would be acceptable trade-offs for the future benefits to be derived from positioning the group outside the increasingly onerous US international tax rules" (p. 17). And if more than 40% of shares change hands, the firm can use NOL's and tax credits to reduce the exit tax.

But in either case, the firm is escaping IRC 7874 under its second test, and it is not concerned with the substantial business presence test. That issue is irrelevant. Thus the firm can invert, as opposed to re-domicile. It can select a tax haven to be its new corporate home. It can move from the first box (Worldwide/POI) to the second box (Territorial/POI). It does not have to move its corporate headquarters or senior executives to the new site. Its day-to-day operations can remain untouched. Of course if it wanted to move its headquarters to a jurisdiction in the fourth box (Territorial/Real Seat) it would have the option of doing so. But this would add expense, time and disruption associated with moving corporate offices and senior managers to a new country. They would also need to be concerned with ensuring they complied with the real seat rules in the new jurisdiction.

Option four: re-domicile to a country in which you believe you have a substantial business presence

Re-domiciliation may be an attractive option for firms that have a substantial business presence in another country, particularly if that country has low income tax rates and enforces territorial tax policies. And since the U.S. has very high income tax rates, and is one of the few countries to tax worldwide income, there may be many preferable locations.

For many MNEs, they might evaluate whether they have a substantial business presence in another G-7 country, as they may have extensive operations and a long history of conducting business there. In 2011 the U.S. corporate tax rate is one of the highest in the world. Furthermore, the United States is the only G-7 country maintaining worldwide taxation policies. So there may be tax advantages to selecting one of these sites as the new corporate home, as Enesco did.

In the Kane and Rock model, Enesco moved from the first box (WW/POI) to the fourth box (Territorial/RS), with the caveat that the U.K. is transitioning towards territorial taxation. Enesco claimed it had a substantial business presence in the United Kingdom to escape IRC 7874. In moving its corporate home to the U.K., it shifted management and control of the firm there to comply with U.K. rules.

Leitner and Glicklich (2009) explained why firms may want to pursue this approach: “The U.S. continue to tax corporations on their worldwide income and the looming budgetary deficits make it unlikely that the U.S. will shift to a territorial system in the foreseeable future. On the contrary, the Obama’s Administration’s 2010 budget included several significant revenue-raisers targeting U.S.-based multinationals. These include the elimination of the use of check-the-box disregarded entities to reduce foreign taxation through debt financing arrangements and restrictions on the deductibility of interest attributable to debt that is allocable to foreign operations. While the natural destination for expatriating U.S. corporations would seem to be traditional ‘tax havens’ or similar low-tax jurisdictions, other countries (such as Canada) that offer more favorable treatment of multinational corporations (in the form of lower corporate tax rates and the substantially complete exemption of foreign business income from Canadian tax) may also be attractive relocation alternatives for some companies” (Leitner and Glicklich, 2009, p. 522). While Canada is not considered a tax haven, its 29.5% corporate income tax rate for

2010¹¹⁴ is still far below the 39.2% U.S. rate. Rates in Germany, the U.K., and Italy are scheduled to be approximately 10 points below the U.S. rate next year.

Option five: invert to a country in which you have a substantial business presence, and then re-domicile to a country with an even lower tax rate

Another option was proposed by Rubinger in his 2007 article. It is admittedly the most elaborate maneuver, and it is unlikely many firms would want to attempt it for several reasons to be explained. Nonetheless, it may be a possibility for some firms, and it does illustrate the options that may exist.

Rubinger proposed that a firm could escape U.S. taxation under IRC 7874 by demonstrating it had a substantial business presence in another jurisdiction, such as the United Kingdom. The firm could invert to that country. But rather than shift the management and control of the firm to the United Kingdom, it would shift that activity to another country with even more favorable tax policies. He cited Hungary and Switzerland as two attractive locations, as they have low tax rates, territorial tax policies, and favorable tax treaties with the U.K.

Rubinger (2007) says: “§7874 will apply only if, among other requirements, the expanded affiliated group does not have substantial business activities in the jurisdiction in which the new foreign parent is *created or organized*” (italicized in original). “Therefore, if a U.S.-based multinational has substantial business activities in a high-tax foreign jurisdiction, such as the U.K., it will no longer be possible to invert by using a holding company created in a low-tax jurisdiction, such as Bermuda or Barbados, where there is little, if any presence. Nevertheless, because §7874 is focused on the expanded affiliate group having substantial business activities in the jurisdiction where the foreign parent is created or organized, rather than where such entity is resident for foreign tax purposes, there may still be planning opportunities to avoid the reach of

¹¹⁴ According the Canada Revenue Agency, the Canadian corporate income tax rate decreased by 1.5 points in 2011, and will decrease by another 1.5 points in 2012. Retrieved from <http://www.cra-arc.gc.ca/tx/bsnss/tcps/crptns/rts-eng.html> on January 9, 2011.

§7874 in certain circumstances” (p. 45). Since Rubinger wrote his article the U.K. has taken steps towards territorial taxation, but its income tax rates are still higher than, for example, Hungary’s.

Rubinger (2007) writes: “The management and control of the U.K. holding company is then moved to Hungary, causing the holding company to be treated as a resident of Hungary under the U.K.-Hungary income tax treaty” (p. 46). According to Rubinger that tax treaty offers some benefits to firms managed and controlled in Hungary, such as no withholding on interest and royalties, and low taxes on dividends. “In this scenario, §7874 would not appear to apply because the expanded affiliate group has substantial business activities in the jurisdiction where the foreign holding company is created or organized (i.e., the U.K.), even though such company is a resident of Hungary...” (p. 46).

While Rubinger focused on the U.K., this is not the only location where this is possible. Conceptually a MNE might invert to any country in which it has a substantial business presence, and simultaneously re-domicile to a country with low tax rates, territorial tax policies, and favorable tax treaties.

From a legal perspective, it appears Rubinger’s proposal is feasible. However there are several practical issues which may make it unattractive to many U.S.-based companies. While taxes are important, relocating a company from the United States to Hungary (or another low tax jurisdiction) may not make sense for many operational reasons. Access to customers, capital markets and operations may suffer, and these are very important considerations. In addition, Rubinger’s example relies in part on favorable tax treaties. But tax treaties are not permanent; they can be renegotiated. It would be very damaging and costly if a firm moved its headquarters overseas, and then saw many of the tax benefits disappear if countries renegotiated a tax treaty. Rubinger’s proposal may make sense if a firm expected to achieve operational improvements through relocation, but for other firms it may be too risky to consider.

Conclusion

While IRC 7874 has generally been considered successful at limiting corporate inversions, the forces that motivated that activity have, if anything, grown stronger. Those drivers include high U.S. corporate income tax rates, and complex, worldwide taxation policies. As Leitner and Glicklich (2009) wrote, “The fundamental incentives that drove companies to flee the United States are still there for those that can avoid being subject to the anti-inversion rules” (p. 515).

§7874 has made it more difficult to escape U.S. tax policies, but it has not made it impossible. Most start-up firms would be wise to incorporate abroad, unless they plan to do considerable business with the U.S. government. When a domestic firm merges with a foreign enterprise, they might choose the latter to be the corporate parent, at least for tax purposes. U.S. worldwide tax policies increase tax and administrative costs, and there are no signs this will change soon.

IRC §7874 also includes several escape clauses U.S. firms might be wise to consider. If they are attracting new investors, they might use that opportunity to invert to a tax haven. If they believe they have a “substantial business presence” in another country, they might consider re-domiciling to that location. Tax rates and policies are more attractive in almost all other jurisdictions.

These opportunities may not exist for all firms, but they do represent a threat to the U.S. tax base. While many countries are lowering tax rates and most enforce territorial international tax policies, the U.S. is maintaining high corporate tax rates and maintaining worldwide taxation. In the short-run these policies may be effective, but in the future they may not be. As the Office of Tax Policy (2002) report stated: “Measures designed simply to halt inversion activity may address these transactions in the short-run, but there is a serious risk that measures targeted too narrowly would have the unintended effect of encouraging a shift to other forms of transactions to the detriment of the U.S. economy in the long run” (p. 2).

If the U.S. wants to attract businesses and investment there needs to be an incentive to make it their corporate home. It is understandable that Congress has directed government agencies not to do business with inverted businesses. However, this doesn't address the real problem, and it only provides financial incentives to firms with substantial government contracts. There needs to be some advantage to being headquartered in the United States. Lower tax rates and more straightforward tax policies would be a more effective approach, as these would encourage all businesses to make the U.S. their corporate home.

In the end, the United States needs to become a more attractive location for business investment, and its tax policies need to be competitive. As Leitner and Glicklich (2009) said: "Ultimately, if the U.S. wishes to remain a preferred location for multinationals, it will need to move to a more competitive international tax regime" (p. 522). In 2002 the U.S. Office of Tax Policy said: "A comprehensive review of the U.S. tax system, particularly the international tax rules, is both appropriate and timely. Our overarching goal must be to maintain the position of the United States as the most desirable location in the world for place of incorporation, location of headquarters, and transaction of business" (p. 30). Due to high income tax rates and worldwide tax policies, it seems the United States today is far short of that goal.

The U.S. should also consider changing its place of incorporation rules. As Kane and Rock noted, these rules are easy to manipulate, and made it simple for businesses to invert. Today they make it easy for a start-up firm to select a corporate home where it may have little or no business presence. Real seat rules focus on business substance and are more difficult to manipulate. If it does consider real seat policies, the U.S. should consider rules in other countries and anticipate technological changes. While the U.K rules focus on where management and control of a firm exists, one can imagine a world in which senior managers work in different countries and use advanced technologies to communicate and make key decisions. In some cases it may be difficult to identify one country from which a firm is managed.

Finally, the U.S. should also consider rewriting IRC 7874. Determining a firm's tax status based on how many shares change hands does not seem like the most logical approach. There should be better ways to determine whether a restructuring has objectives other than minimizing taxes. And the "substantial business presence" test within that law needs more clarity, as VanderWolk argues. Taxpayers, investors and even regulators deserve more certainty than the current rules provide.

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The IRS Investor Model

Abstract

Over the past decade many U.S.-based Multi-National Enterprises (MNEs) have reduced their worldwide tax rate, using Cost Sharing Agreements (CSAs) to transfer intellectual property rights to low-tax jurisdictions. The U.S. Internal Revenue Service (IRS) has questioned whether businesses have valued these transfers appropriately. In January, 2009 the IRS issued Temporary Regulations to govern IRS qualified CSAs, further refining the Investor Model it first proposed in 2005. The Investor Model purports to value intellectual property contributions to CSAs in the same way third-party investors would, using risk-adjusted, time value of money principles. The purpose of this paper is to explain the Investor Model, identify ways in which it has changed since 2005, and offer suggestions for improvement. This paper also considers whether U.S.-based MNEs might want to seek “safe harbor” under the IRS’s regulations. In the author’s view, the 2009 Temporary Regulations have improved key flaws in the 2005 Proposed Regulations, but a several important issues remain. Further, since they were released, the IRS has lost several key cost sharing cases that may weaken the IRS’s position. For these reasons the author does not recommend seeking “safe harbor” by structuring an IRS qualified CSA, and believe taxpayers should consider other alternatives, including an Advanced Pricing Agreement (APA).

Valuing Intellectual Property

Intellectual property is a key driver of 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 technologically advanced business sectors, such as software, electronics 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 (IP), there is an emerging market for businesses that buy and sell IP, and conflicts between firms over intellectual property rights are frequently litigated.¹¹⁵

This paper focuses upon the IRS's Investor Model, which purports to value intellectual property using the same approach as a third party investor. The U.S. Internal Revenue Service (IRS) issued Temporary Regulations in 2009 that further refined the Investor Model it first proposed in 2005. The IRS Investor Model is an important subject for several reasons. First, it impacts the way many U.S.-based Multinational Enterprises (MNEs) will value intellectual property for tax purposes, and this can have a significant impact upon both U.S. business tax obligations and Federal tax revenue. Second, other organizations, such as OECD, are also evaluating how intangible assets should be taxed. It has recently initiated a project to review its policies and make recommendations for improvement, so it may also want to evaluate the Investor Model.

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 electronic products are developed. In contrast, a legal perspective focuses upon where that property is owned, protected and taxed.

¹¹⁵ As an example, a firm owned by Microsoft's co-founder, Paul Allen, has filed patent infringement lawsuits against Google, Facebook and eBay. See "Microsoft Co-Founder Launches Patent War" Wall Street Journal, August 28, 2010. That article also notes that Microsoft's former chief technology officer, Nathan Myhrvold, has formed a firm named Intellectual Ventures to acquire and license patents.

U.S.-based MNEs have historically initiated development of intellectual property within U.S. geographic borders. American intellectual property laws have generally protected and taxed profits generated by these assets. In such situations, the geographic and legal views of intellectual property development are identical. As U.S. firms have expanded abroad, some have drawn upon the talents of scientists and marketers overseas to develop intellectual property. From a geographic perspective, the intellectual property may be developed in several locations, but in many cases it has been owned, protected and taxed by American laws. In such situations, 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.

Cost Sharing Agreements

Cost Sharing Agreements (CSAs) were introduced as an option to this model in 1968. In CSAs two or more related legal corporations share intellectual property development costs. According to U.S. tax law 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.”¹¹⁶ The participating members of a CSA are related entities within the same MNE, and the IRS Investor Model only applies when these organization pool resources to develop intellectual property in an IRS qualified CSA.

It is important to note that IRS qualified CSAs are designed to be a way for firms to establish a “safe harbor” with U.S. tax authorities. At their essence, they are a way for firms to comply with IRS rules governing CSAs, and to achieve some assurance the IRS will not challenge the agreement, and assess back taxes and penalties for failure to comply with the arm's length standard. But no firm is required to form an IRS-sanctioned CSA and comply with all of its rules. First of all, CSAs are not intended to be used by unrelated parties, should they agree to share costs and jointly fund research and development. But second, there is no requirement that related parties fund joint development costs through an IRS qualified CSA. They can choose to create a CSA outside of the IRS's cost sharing, “safe harbor” rules, as long as they comply with the arm's length standard. However the IRS is less likely to challenge firms that operate under

¹¹⁶ 1968 Regs. §1.482-2(d)(4)

its CSA regulations, as the IRS believes its regulations reflect arm's length principles. The IRS may be more likely to challenge firms that develop their own methodology. IRS qualified CSAs are a way to achieve more assurance a CSA's results will not be challenged by tax authorities, assuming the firm complies with the IRS's regulations.

U.S.-based MNEs have shared development costs with their overseas subsidiaries through IRS qualified CSAs since 1968. When CSAs are formed, generally one member of the CSA transfers the right to use its intellectual property to the CSA, and other members of the CSA generally need to pay for the right to use those assets. Current U.S. tax regulations 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..."¹¹⁷ In short, if the CSA complies with IRS regulations the tax authorities will generally respect its results, unless they determine it violates the arms-length standard. When these rules were first promulgated in 1968, the IRS gave MNEs little guidance concerning how they should value intangible property transfers and comply with the arm's length standard.

The Tax Reform Act of 1986 introduced the "commensurate with income" standard, a key addition to U.S. transfer pricing law. At that time Congress was concerned businesses were transferring 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 the Internal Revenue Code (IRC): "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."¹¹⁸ In other words, the price paid for the property must be related to the income generated from it. The relative importance of these standards, "arm's-length" and "commensurate with income," plays an important part in U.S. transfer pricing law to

¹¹⁷ Ibid

¹¹⁸ IRS §482

this day. Do these standards support and complement each other, or are they two completely different standards? Keates, Muyelle and Wright (2009) write: “The interpretation of ‘commensurate with income’ has been subject to much debate since 1986. At times, it seems that the IRS believes that the arm’s length standard has been replaced with a commensurate with income standard that allows the IRS to disregard third-party evidence (i.e. comparable third-party transactions) in favour of economic analysis that effectively maximizes U.S. income...Indeed, the Tax Court, in its decision in *Xilinx, Inc. v. Commissioner* stated that the commensurate with income standard is intended to supplement and support, not supplant, the arm’s length standard” (p. 166). Nonetheless, the relative importance of these standards, and how they interact with each other, is an actively debated topic.

U.S. Tax Law and Treasury Regulations

The Internal Revenue Code (IRC) is the most authoritative source of tax law within the United States. The U.S. Congress passes the tax code and those laws are signed into law by the American president. As such, the IRC represents the guiding principles by which individuals and businesses are taxed. However the IRC frequently states general concepts, and needs to be supplemented by more detailed taxpayer guidance, that interpret the law and provide examples concerning how tax laws should be applied. Hoffman, Raabe, Smith and Maloney (2008) write: “Regulations are issued by the U.S. Treasury Department under authority granted by Congress. Interpretive by nature, they provide taxpayers with considerable guidance on the meaning and application of the Code. Although not issued by Congress, Regulations do carry considerable weight. They are an important factor to consider in complying with tax law” (p. 1-21).

Regulations are issued as Proposed Regulations, Temporary Regulations, or Final Regulations. In general, the Treasury Department first issues Proposed Regulations, and solicits taxpayer input on proposed rules before they are finalized. During this period, the regulations carry little weight with courts. When the regulations are finalized, they become tax law and are generally authoritative. On occasion, however, taxpayers will argue that Final Regulations are inconsistent with the IRC, and sometimes courts will agree with taxpayers. However the burden is on the

taxpayer to prove the regulations are inconsistent with the IRC, and such court rulings are not frequent.

In January, 2009 the Treasury Department issued new rules defining its Investor Model, which govern IP valuation in a Cost Sharing Agreement. The rules were simultaneously issued as Temporary and Proposed Regulations. Hoffman, Raabe, Smith and Maloney (2008) write: “Sometimes the Treasury Department issues Temporary Regulations relating to matters where immediate guidance is critical” (p. 1-22). They state: “Temporary Regulations have the same authoritative value as final Regulations and may be cited as precedent for three years. Temporary Regulations must also be issued as Proposed Regulations and automatically expire within three years after the date of issuance. Temporary Regulations and the simultaneously issued Proposed Regulations carry more weight than traditional Proposed Regulations” (p. 1-22). The Treasury Department’s action in releasing the new rules as both Temporary and Proposed Regulations indicates it believes this is an important issue. To distinguish them from other regulations, I will consistently refer to the January, 2009 regulations as Temporary Regulations, though they were released as both Temporary and Proposed Regulations.

The Temporary Regulations replace Proposed Regulations governing CSAs, which were released in October, 2005. The IRS Investor Model was first explained in the Proposed Regulations. The 2009 Temporary Regulations are similar to the 2005 Proposed Regulations, and explain six ways to value intangible property contributions to a CSA. However, in response to taxpayer feedback, the Treasury Department modified and relaxed the regulations in a number of ways, which will be explained in this paper. The 2009 Proposed Regulations now supplement the prior regulations that controlled CSAs, which were first released in the 1995. I will refer to these rules as the 1995 Regulations.

1995 Regulations

When U.S. transfer pricing regulations were released in 1968, they included minimal taxpayer guidance concerning how firms could structure and value intangible property contributions to CSAs. The first cost sharing regulations were released in 1995, and were effective as of January 1, 1996. The key features of CSAs described in the following paragraphs are still Treasury

Regulations, and they have not been modified by the Investor Model. They describe the legal and organizational requirements that govern CSAs. The Investor Model specifically addresses how intangible property should be valued within CSAs. The new regulations also include additional organizational requirements intended to support Investor Model enforcement.

As mentioned, a CSA is a contract between two or more parties to share the costs of developing intangible property. In IRS qualified CSAs, costs are to be allocated in proportion to the benefits each participant expects to receive from the agreement. IRS qualified requirements include two or more participants, a way for participants to share costs based on anticipated benefits, a process for making financial adjustments to the CSA, and documentation of the agreement.¹¹⁹ The participants share the costs of developing intangible property. However they profit separately from the intellectual property created.

Intangible development costs should include all operating expenses, and an arm's length charge for property made available to the CSA.¹²⁰ However there were conflicting views concerning whether certain costs, such as the value of stock options, should be shared in qualified CSAs. Many firms did not include stock option costs in CSAs, so the 1995 Regulations were modified in 2003 to state specifically that the value of stock-based compensation, such as stock options, must be included in the CSA.¹²¹ Stock option costs were litigated in a recent case, *Xilinx Inc. v. Commissioner*, which will be discussed later in this paper.¹²²

According to the 1995 Regulations, costs must be shared in proportion with "Reasonably Anticipated Benefits."¹²³ Reasonably Anticipated Benefits (RABs) are defined as "the aggregate benefits that (the controlled taxpayer) reasonably anticipates it will derive from covered

¹¹⁹ Reg. §1.482-7(b)(1)-(4)

¹²⁰ Reg. §1.482-7(d)(1)

¹²¹ Reg. §1.482-7(d)(2)(i)

¹²² *Xilinx Inc. v. Commissioner*, 598 F. 3d 1191, 9th Cir. (March 22, 2010).

¹²³ Reg. §1.482-7(f)(1)

intangibles.”¹²⁴ Benefits are “additional income generated or costs saved by the use of the covered intangibles.”¹²⁵ The 1995 Regulations state “the most reliable estimate of Reasonably Anticipated Benefits” should be used to measure a participant’s share of those benefits.¹²⁶

Reasonably Anticipated Benefits may be measured directly or indirectly. The regulations favor direct measurement of the profits earned by an intangible asset. However it is frequently difficult to measure precisely the profit generated by an intangible asset. In most cases taxpayers use an indirect measure of profit, such as an estimate of profit earned per unit sold, to calculate the profit earned from intangible property.¹²⁷

Related taxpayers need to make 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, and Taxpayer Y expects 40%. X 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 a cost contribution of \$100K to Y, to apportion costs with RABs. Once that cost contribution is made, costs are apportioned with the benefits each expects to receive from the intangible properties created.

¹²⁴ Reg. § 1.482-7(e)(2)

¹²⁵ Reg. § 1.482-7(e)(1)

¹²⁶ Reg. § 1.482-7(f)(3)(i)

¹²⁷ See Audit Checklist, Doc. Set Four, directing IRS examiners to test Reasonably Anticipated Benefit shares against actual results.

Table I: Cost Contributions	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 profits earned will differ from RABs.

Note that in the example above I have assumed each of the parties invests resources locally to create the IP funded in the Cost Sharing Agreement. However there is no requirement that participants actually create Intellectual Property to be a member of a CSA. Participants in a CSA can essentially be passive investors in the agreement, and provide only financial resources to support it. Within the tax community, organizations that contribute only cash to CSAs are called “cash boxes.”¹²⁸ Thus an organization’s contribution to a CSA might be only the cost contribution.

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: “If a controlled participant makes pre-existing intangible property in which it owns an interest available to other controlled participants for purposes of research and development in the intangible development areas under a qualified cost sharing agreement, then

¹²⁸ See The New U.S. Cost Sharing Regulations: Past, Present, and Future, by Shapiro, Chung and Klitgaard, M. published by Deloitte Development, LLC. Retrieved from [http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us_tax_costsharingregs_020209\(1\).pdf](http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us_tax_costsharingregs_020209(1).pdf) on September 17, 2011.

each such other controlled participant must make a buy-in payment to the owner.”¹²⁹ Valuing this buy-in payment properly is a key objective of the Investor Model.

The 1995 Regulations state 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.”¹³⁰ These payments can be one-time payments, installment payments, or royalties.¹³¹

For example, suppose taxpayers X, Y and Z form a CSA. Based upon RABs, 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: Buy-in payments	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 1995 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

¹²⁹ Reg. §1.482-7(g)(2)

¹³⁰ Reg. §1.482-7(g)(2)

¹³¹ Reg. §1.482-7(g)(7(i)-(iii))

benefits, then the district director may conclude that the economic substance of the agreement between the controlled participants is inconsistent with the terms of the cost sharing arrangement.”¹³² In such cases 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 additional interests in covered intangibles.”¹³³ In other words, the IRS can revalue the buy-in, and charge the taxpayer with additional taxes, interest, and sometimes penalties. Under the prior rules a taxpayer could also adjust buy-ins to the CSA to align costs and benefits more accurately, based on additional information and experience with the agreement.

Concern with 1995 Regulations

Since the 1995 Regulations were enacted IRS qualified CSAs have become more popular with U.S.-based MNEs. The IRS is concerned that CSA buy-ins are under-valued by U.S. taxpayers, reducing U.S. tax revenue. When the Investor Model was first proposed in 2005 an IRS spokesman 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.”¹³⁴ As an example, the IRS sued Veritas, a software firm, for \$2.5 billion over the value of software licenses included in a CSA formed with its Irish subsidiary. The *Veritas* case will also be discussed later in this paper, as it provides important insights and precedents concerning how U.S. courts may view the Investor Model when IRS/taxpayer disputes are litigated.

When the Investor Model was first announced in 2005, the IRS explained its rationale for the new rules in the regulations’ preamble. The IRS stated: “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

¹³² Reg. §1.482-7(g)(5)

¹³³ Ibid

¹³⁴ “Wearing of the Green: Irish Subsidiary Lets Microsoft Slash Taxes in U.S. and Europe,” The Wall Street Journal; November, 7, 2005, page 1

must be provided as a condition of entering into a cost sharing arrangement.”¹³⁵ According to the IRS, the Investor Model supports the arm’s-length transfer pricing standard; it is not a departure from it.

Tobin (2006) also said the IRS Investor Model was motivated by the perception that prior CSA regulations allowed taxpayers to undervalue buy-in transactions. Tobin wrote: “The IRS has been especially concerned that taxpayers, through the buy-in component of CSAs, have been transferring intangible assets outside the United States for less than arms-length consideration” (p. 31). The Tax Executives Institute (TEI) agreed this was 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” (2005, p. 629). However in general TEI did not agree with the IRS’s assumption; it argued that it is inherently difficult to value intellectual property accurately.

Need for an Investor Model

The IRS believes the Investor Model is necessary based on experience administering the 1995 Regulations. It argues CSAs are unlike any other business arrangements. This makes it difficult to identify arm’s-length transfer prices, and has prompted the IRS to develop a new regulatory approach. To explain the unique features of CSAs, the IRS stated in its preamble to the 2005 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

¹³⁵ Preamble to Proposed Regulations, 70 Fed. Reg. 51115, page 5, August 29, 2005.

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.”¹³⁶

The IRS also believes it lacks information available to the taxpayer, which puts it in a difficult position. The IRS says it 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...”¹³⁷ Lacking accurate information concerning an investment’s prospects, it may appear to the IRS a taxpayer has structured an appropriate arm’s-length buy-in. Years later, it may become apparent the price paid was far too low. After the fact it may be impossible for the IRS to go back and revalue a CSA buy-in, as the statute of limitations expires three years after a tax return is filed, unless the IRS and taxpayer to keep a return open for review.

Thus the IRS proposed its Investor Model to value intangible property. While the Investor Model has many features, two concepts are central to it. One is that investors explicitly consider both risk and return when making investments. Thus safer investments merit lower returns, and riskier investments warrant higher returns. When making investments, businesses and individuals generally look at their available options to determine where they can earn the best risk-adjusted returns. Second, investors consider the time value of money when making investments. Thus related organizations investing in a CSA should use these same principles. The preamble to the 2005 Proposed Regulations stated: “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

¹³⁶ Preamble to Proposed Regulations, 70 Fed. Reg. 51115, Section A. Published in Federal Register August 29, 2005.

¹³⁷ Preamble to Proposed Regulations, 70 Fed. Reg. 51115, Section E-3. Published in Federal Register August 29, 2005

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 return that could have been achieved through an alternative investment that is realistically available to it.”¹³⁸ Further, the preamble states: “The proposed regulations recognize that there may be different risks, and hence, different discount rates associated with different activities undertaken by a taxpayer. Consistent with the investor model, for items relating to a CSA, the discount rate employed should be that which most appropriately reflects...the risks of development and exploitation of the intangibles anticipated to result from the CSA”¹³⁹

The Investor Model

The Investor Model’s key objective is valuing intangible assets accurately. Introducing the Investor Model, the IRS stated in the 2005 Preamble to its Proposed Regulations:

“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.”¹⁴⁰

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

¹³⁸ Preamble to Proposed Regulations, 70 Fed. Reg. 51115, Section A. Published in Federal Register on August 29, 2005.

¹³⁹ Preamble to Proposed Regulations, 70 Fed. Reg. 51116, Section C(2)(f). Published in Federal Register on August 29, 2005.

¹⁴⁰ Preamble to Proposed Regulations, 70 Fed. Reg. 51115, page 7, August 29, 2005.

preserve the Comparable Uncontrolled Transaction (CUT) method, although the IRS does not believe it should be used frequently. Finally, a sixth unspecified method is permitted by the IRS, but it must be consistent with Investor Model principles. This allows taxpayers to create their own methodology, if they believe it is the best method to value intangible assets. Note that all six methods were defined in both the 2005 Proposed and 2009 Temporary Regulations, and are very similar in both sets of regulations. In some cases, modifications were made to the 2009 Temporary Regulations, based on feedback from tax professionals.

The “best method rule” states taxpayers should select a method that best reflects the arm’s-length standard, based on facts and circumstances. The 2005 Proposed Regulations identified a number of ways in which intangible asset transfers could be valued, and the number of examples generated confusion concerning which method should be used in certain circumstances. The 2009 Temporary Regulations attempt to clarify this by stating the new rules: “clarify that these principles were intended to provide supplementary guidance on the application of the best method rule to determine which method, or application of a method, provides the most reliable measure of an arm’s length result in the CSA context. In other words, the principles provide best method considerations to aid the competitive evaluation of methods or applications, and are not themselves methods or trumping rules.”¹⁴¹

There is an overriding valuation investor model principle, applicable to all methods. The Proposed 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.”¹⁴² In other words, taxpayers should plan to earn a risk adjusted rate of return. The 2009 Temporary Regulations support this approach, and state in that

¹⁴¹ Preamble to Temporary Regulations, 74 Fed. Reg., No. 2, p. 343, January 5, 2009.

¹⁴² Prop. Regs. §1.482-7(g)(2)(viii)

preamble: “The investor model is a core principle of the 2005 proposed regulations...(a CSA participant) is investing for the term of the CSA Activity and expects returns over time consistent with the riskiness of that investment.”¹⁴³

The Treasury Department has also indicated it may be open to taxing cash flow, rather than income. On the one hand, Discounted Cash Flow (DCF) analysis has generally proposed that investors should focus on cash flow, not income, when making investment decisions. But U.S. tax laws have not generally taxed cash flow, so making this change would be a significant departure from existing rules and years of legal precedents. In addition, the IRS seems to doubt whether it can make this change and comply with the “commensurate with income” standard stated in IRC 482. The preamble to the Temporary Regulations states: “The Treasury Department and the IRS continue to consider, and solicit comments, on whether and how the cost sharing rules could reliably be administered on the basis of cash flows instead of operating income, and whether such a basis is consistent with the second section of 482 and its CWI (commensurate with income) standard.”¹⁴⁴ Beyond stating it is willing to consider taxing cash flow, the regulations show no indication the IRS has given much thought to making this change, which may suggest it considers this issue to be a low priority, at least for now.

Taxpayers must also comply with IRS documentation regulations to qualify for a safe harbor. During the life of the CSA, the taxpayer is responsible for updating and monitoring results, calculating returns earned by CSA participants, and providing that information to the IRS when it is requested.

Key Regulatory Changes in the Investor Model

One of the IRS’s responsibilities is to collect taxes due to U.S. government, consistent with U.S. tax law. As mentioned, the IRS believes taxpayers have structured CSAs that do not properly value the intellectual property contributed to CSAs. Thus, the Treasury Department has developed a model which, in its view, will value those assets more accurately. As a result, the

¹⁴³ Preamble to Temporary Regulations, 74 Fed. Reg., No. 2, p. 343, January 5, 2009.

¹⁴⁴ Ibid, p. 344.

IRS has implemented a number of important changes to CSAs, which it believes will support arm's length valuation.

In the Investor Model, CSA participants must obtain permanent rights to use the intellectual property rights contributed in a CSA. In contrast, the 1995 CSA regulations did not require permanent IP transfers. Using the 1995 rules, CSA participants imposed time limitations on intellectual property transfers, and argued this reduced their value. As the preamble to the 2005 Proposed Regulations stated the IRS needed to make this change:

“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.”¹⁴⁵

In other words, the intellectual property transfers must be permanent. Taxpayers cannot reduce the buy-ins by limiting license duration. The 2009 Temporary Regulations continued to require permanent intangible asset contributions to a CSA.¹⁴⁶ However the Temporary Regulations have adopted new terminology. The Temporary Regulations use the term “platform contribution” to describe a contribution of intangible property to CSAs, replacing the “reference transaction”

¹⁴⁵ Preamble to Proposed Regulations, 70 Fed. Reg. 51115, pages 18-19 August 29, 2005.

¹⁴⁶ Regulation 1.482-7T(b)(4)(i-iii)

term used previously.¹⁴⁷ When intangible property is contributed to a CSA, it is now called a Platform Contribution Transaction (PCT) which requires compensation.

The 2009 Temporary Regulations require CSA participants divide their markets into permanent, exclusive, and non-overlapping markets. The 1995 Regulations did not impose such a requirement. Kochman (2005) wrote, “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). In other words, dividing markets enables the IRS to evaluate buy-in valuations, since it makes it possible to determine the market size each CSA participant serves. This enables calculation of the buy-in. However in response to taxpayer feedback, the 2009 Temporary Regulations permit CSA participants more flexibility when dividing markets than did the 2005 Proposed Regulations. The Proposed Regulations would have required CSA participants to divide their markets into non-overlapping geographic territories. The Temporary Regulations still require CSA participants divide their markets into permanent and exclusive markets, but they no longer require firms to divide markets geographically. The 2009 Temporary Regulations state: “To provide taxpayers with more flexibility in designing qualifying divisional interests, the temporary regulations permit use of a new basis—the field of use division of interests—in addition to the territorial basis.”¹⁴⁸ For example, this would allow CSA participants to allocate markets based on distribution channel. One CSA participant might sell its products to distributors, while another might sell products online through a website. In this respect, the 2009 Temporary Regulations are more flexible than the 2005 Proposed Regulations.

The Investor Model grants the IRS the sole right to make adjustments to the CSA, to align costs with benefits. When a controlled participant’s profits fall outside an acceptable range determined by IRS, it is empowered to change the agreements, but taxpayers cannot do the same. In the preamble to the 2005 Proposed Regulations the IRS writes: “Because the guidance on periodic adjustments is intended to address the problem of information asymmetry, and because

¹⁴⁷ Preamble to Temporary Regulations, Vol. 74, No. 2, p. 342, January 5, 2009.

¹⁴⁸ Preamble to Temporary Regulations, Vol. 74, No. 2, p. 341, January 5, 2009.

it is exceedingly 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.”¹⁴⁹ These adjustments can include adding to or removing costs from the CSAs’ Intangible Development Costs, changing shares for the CSA participants, or assigning unallocated territorial interests to participants. In the preamble to the 2009 Temporary Regulations, the IRS acknowledged that a number of taxpayers believed this was inherently unfair, and they argued taxpayers should also have the right to make adjustments based on actual history.¹⁵⁰ However the IRS has maintained its position in the Temporary Regulations, and the regulations give the IRS the sole authority to make changes to CSAs based on actual performance. It argues this was Congress’s intent when the commensurate with income standard was developed. However, others disagree with the IRS position. Bhasin (2009) writes: “The regulations reaffirm the use of asymmetric periodic adjustment. That is, when a U.S. parent company sells the rights to certain intangibles to its foreign subsidiary, the IRS will make an adjustment only if the buy-in payment from the foreign subsidiary is low. No adjustment would be made if the foreign subsidiary overpays for the rights to the rights to these intangibles” (pp. 1-2). Further, Kirschenbaum and Rahim (2005) believe the IRS’s position may not be sustained in court. 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). It is possible this disagreement will be litigated in the future.

The 2009 Temporary Regulations make several important changes and improvements to the 2005 Proposed Regulations. The 2005 Proposed Regulations essentially assumed that contributions of intellectual property to a CSA had an unlimited life, and could contribute to profits indefinitely into the future. For example, the 2005 Proposed Regulations stated investor model valuation extends “over the entire period of developing and exploiting the cost shared

¹⁴⁹ Preamble to Proposed Regulations, 70 Fed. Reg. 51115, page 58, August 29, 2005.

¹⁵⁰ Preamble to Temporary Regulations, Vol. 74, No. 2, p. 347, January 5, 2009.

intangibles.”¹⁵¹ 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.”¹⁵² Given that one product frequently leads to further versions, under the Proposed Regulations it is possible the benefits would have extended indefinitely into the future, conceivably in perpetuity.

In the 2009 Temporary Regulations the IRS modified its position, and acknowledged that at least in some circumstances, intangible assets have a finite useful life. The Preamble to the 2009 Temporary Regulations states: “It may be, depending upon facts and circumstances, that the technology is reasonably expected to achieve an incremental improvement in results for only a finite period (after which period results are reasonably anticipated to return to the levels that would otherwise have been expected absent the investment). The period of enhanced results that justifies the platform investment in such circumstances effectively would correspond to a finite, not a perpetual life.”¹⁵³ Similarly, in one example in the Temporary Regulations, the IRS gives an example of an intangible asset that has a useful life of three years. When describing the contribution of a certain software product, ABC, the Temporary Regulation states: “The current version of ABC has an expected product life of three years,”¹⁵⁴ and the compensation for the contribution of that asset terminates after three years. But note, the IRS has not agreed intangible assets have finite lives in all circumstances. It has only agreed that in certain cases certain intangible assets have limited lives. So in some ways the 2009 Proposed Treasury Regulations are a step forward, but much depends upon how the IRS enforces its rules, and there is no assurance it will generally concede that intangible assets have limited lives. In fact, the IRS argued for perpetual life of intangibles in the *Veritas* case, which was decided after the release of the Treasury Regulations cited above. That case will be discussed in more detail later in this paper.

¹⁵¹ Prop. Regs. §1.482-7(g)(8)(viii)(A)

¹⁵² *Ibid*

¹⁵³ Preamble to Temporary Regulations, 74 Fed. Reg., Section C-3.

¹⁵⁴ Treas. Reg §1.482-7T(c)(4)(ii)

Similarly, the 2009 Temporary Regulations improve the 2005 Proposed Regulations by allowing firms to employ declining royalty rates to compensate an intangible property contributor. The 2005 Proposed Regulations specifically stated declining royalty rates could not be used. In those regulations it was assumed that since once product version led to further versions, the original intellectual property contribution had permanent value. At the time these Proposed Regulations were released, I argued this placed excessive value on the original intellectual property, and too little on subsequent improvements. The 2009 Temporary Regulations replace these unrealistic assumptions with more balanced ones, and thus are an improvement. For example, in one example the Temporary Regulations provide an example that says: “The current version of ABC has an expected product life of three years. P and S enter into a contingent payment agreement to cover both the PCT Payments due from S for P’s platform contribution and payments due from S for the make or sell license. Based on the uncontrolled make or sell licenses, P and S agree on a sales-based royalty rate of 20% in Year 1 that declines on straight line basis to 0% over the 3 year product life of ABC.”¹⁵⁵ This assumption is more reasonable, and was also supported by the Tax Court in the *Veritas* case.

In addition, the 2009 Temporary Cost Sharing Regulations make it clear that intangible assets are created during the period of the CSA. The 2005 Proposed Regulations essentially assumed that valuable intangible assets were created only before the CSA formation, and they limited the reward to organizations that did not contribute pre-existing intangible assets to the CSA. When I first reviewed the 2005 Proposed Cost Sharing Regulations, I thought they assigned too much value to intangible assets created before a CSA was formed. I believed they did not recognize the purpose of a CSA was to fund the development of new intellectual property. The 2009 Temporary Regulations correct this, stating: “A platform contribution is any resource, capability, or right that a controlled participant has developed, maintained, or acquired externally to the intangible development activity (whether prior to or during the course of the CSA) that is reasonably anticipated to contribute to developing cost shared intangibles.”¹⁵⁶ Thus the new

¹⁵⁵ Reg. §1.482-7T(c)(4)(ii)

¹⁵⁶ Treas. Reg. §1.482-7T(c)(1)

regulations specifically state intangible assets contributed to a CSA during the agreement is a platform contribution, which is an improvement.

Reactions to Investor Model

When the 2005 Proposed Regulations were released, many tax practitioners and analysts were very critical of them. They were criticized as unclear, overly complex, and they placed a large administrative burden on firms. At that time Tobin (2006) said “For the most part, these changes are not for the better” (p. 31). Kochman (2005) said: “in trying to guard against bargain transfers of existing intangibles, the proposal would put huge upfront burdens on participants” (p. 11). Others argued that they were in conflict with the arm’s length standard. For example, Kirschenbaum and Rahim (2005) wrote of the Investor Model: “But it is a substantial departure from well-entrenched global transfer pricing principles set forth the Organization for Economic Cooperation and Development Transfer Pricing Guidelines for Multinational Enterprises and also in other provisions of the Section 482 regulations embodying the arm’s length standard. By relegating cost sharing participants to a fixed and determinable (albeit risk-adjusted) financing return, the proposed regulations deny taxpayers the right to structure their transactions as they see fit (provided that the allocation of risk was made at a time when the results of the undertaking are not known or knowable). This violates a fundamental tenet of tax law first articulated by Judge Learned Hand in *Helvering v. Gregory*: ‘Anyone may so arrange his affairs that his taxes shall be as low as possible; he is not bound to choose that pattern which will best pay the Treasury; there is not even a patriotic duty to increase one’s taxes’” (p. 2). Similarly, Naegele (2010) wrote: “The 2005 Proposed Regulations, which are the foundation for the 2009 Temporary Regulations, significantly changed all prior sets of cost sharing Regulations, were extremely restrictive, and received substantial criticism when originally issued. The main reason was they actually diverged from the arms-length standard” (p. 33). In short, the 2005 Proposed Regulations were severely criticized.

The reaction to the 2009 Temporary Regulations has been more muted. This does not mean that analysts now support the Investor Model. But in general analysts appear to believe Temporary Regulations are a step in the right direction. Wood (2010) said “the IRS made some welcome

revisions to the more arbitrary limitations initially proposed” (p. 81). Kochman (2009) writes: “The Temporary Regulations retain key concepts and methods of the Proposed Regulations but incorporate a number of taxpayer-friendly technical changes in response to the many comments received by the IRS. The taxpayer/practitioner response has been relatively benign as compared to that to the Proposed Regulations, with only a handful of comments submitted to the IRS and three parties testifying at the April 21, 2009, hearings on the regulations. Unlike the response to the Proposed Regulations, no one has challenged the general approach of the regulations. Instead, commentators have proposed additional technical changes to the rules” (p.556). Shapiro, Chung and Klitgaard (2009) wrote: “The mostly technical changes in the temporary regulations are generally favorable to taxpayers, with the exception of the commensurate with income trigger” (p. 1). And Keates, Muyelle and Wright (2009) said: “The 2008 Regulations modify the 2005 Regulations only slightly, but these regulations have significant implication for other long-term intangibles and services transactions between US and non-US related entities” (p. 166). While these changes are considered improvements, many still have fundamental disagreements with the Investor Model. For example, the director of transfer pricing at Ernst and Young, David Canale, said that while the changes were positive, the Temporary Regulations are still very restrictive, and will make it much less likely firms will want to engage in CSAs (Nadal, 2009, p. 111).

Income Method

As mentioned, the IRS identifies six acceptable Investor Model methods, one of which is unspecified. One is the Income Method, which should be used when only one CSA participant contributes pre-existing intellectual property to the CSA. To determine the value of a CSA buy-in, the participants need to evaluate the value of realistic alternatives to the CSA. The preamble to the 2009 Temporary Regulations states: “Under the general rule, the arm’s length charge was an amount that equated a controlled participant’s present value of entering into a CSA with the present value of the controlled participant’s best realistic alternative.”¹⁵⁷

¹⁵⁷ Preamble to Temporary Regulations, 74 Fed. Reg., No.2, p. 345, January 5, 2009.

The regulations propose two ways the Income Method can be applied. One focuses upon the realistic alternatives available to the organization not transferring intellectual property to the CSA, known as the PCT Payor. The second focuses upon options available to the organization transferring intellectual property to the CSA, called the PCT Payee. The preamble to the 2009 Temporary Regulations states: “In general, they provide that the best realistic alternative of the PCT Payor to entering into a CSA would be to license intangibles to be developed by an uncontrolled licensor that undertakes the commitment to bear the entire risk of intangible development that would otherwise have been shared under the CSA. Similarly, the best realistic alternative of the PCT Payee to entering into the CSA would be to undertake the commitment to bear the entire risk of intangible development that would otherwise have been shared under the CSA and license the resulting intangibles to an uncontrolled licensee.”¹⁵⁸ In short, the Payor should value the option of licensing another organization’s products. The Payee should value the option of exploiting the intangible itself, without licensing it to another organization.

For example, suppose a MNE invests in a new technology. In one scenario the U.S. 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 U.S. 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. In the IRS’s view, a rational investor would demand the same profit, discounted to present value, with or without the CSA. In the following example the Payor funds the licensing activity through a royalty levied on sales, though it could be funded in other ways, such as an upfront payment.

¹⁵⁸ Ibid

Table III: Income Method PCT Payee	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 (PVTP)	\$100M	\$100M	

The U.S. parent effectively earns the same profit despite under either scenario. But note these are discounted profits. The PCT Payor earns the discount rate, so its PVTP is zero.

As mentioned, under the Income Method firms can also evaluate realistic alternatives available to the organization not contributing pre-existing intellectual property to the CSA. This is the PCT Payor. 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 contributions to the CSA. FS invests in the CSA, but contributes no intangible assets 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.

Table IV: Income Method, PCT Payor	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)
Present Value of Total Profits	Territorial Profits plus \$30M	-0-

In the above scenario, the Present Value of Total Profits for FS equal zero. But note, from a financial accounting perspective, it is allowed to earn the discount rate on its investment. This makes determination of the discount rate extremely important. However if there are any extraordinary profits earned on this investment, they belong to USP, since it was the organization that contributed intangible assets to the CSA.

Thus the Temporary Regulations identify two ways in which the Income Method can be applied, and the “best method rule” determines which approach should be employed.¹⁵⁹ The Temporary Regulations state: “Thus, comparability and the quality of data, the reliability of the assumptions, and the sensitivity of the results to possible deficiencies in the data and assumptions, must be considered in determining whether this method provides the most reliable measure of an arm’s length result.”¹⁶⁰

¹⁵⁹ Treas. Reg. §1.482-1(c)

¹⁶⁰ Treas. Reg. §1.482-7T(g)(4)(v)(A)

The 2005 Proposed Regulations were criticized by some tax professionals, since they seemed to suggest the Weighted Average Cost of Capital (WACC) was the preferred discount rate to employ. Kochman (2009) writes: “The discount rate guidance in the Proposed Regulations was interpreted as implying a strong preference for a company’s WACC. The Temporary Regulations clarify that discount rates should be determined based on market conditions and may differ among a company’s various activities and transactions. Different risk profiles for various realistic alternatives may lead to different discount rates, as might the form of payment in a PCT” (p. 560).

Critics argued that the risk of a particular project could be very different from the firm’s WACC, which is undoubtedly true. The 2009 Temporary Regulations provide more flexibility concerning how firms should determine an appropriate discount rate. The 2009 Preamble explains investors ultimately look for the highest after-tax rate of return, but payments are generally made in pre-tax dollars.¹⁶¹ The Temporary Regulations do not emphasize using the WACC. The 2009 Temporary Regulations also state: “a discount rate or rates should be used that most reliably reflect the market correlated risks of activities or transactions and should be applied to the best estimate of the relevant projected results...”¹⁶² In short, firms should use a discount rate that reflects that that particular investment’s risk, not the firm’s WACC. The discount rate should reflect the level of risk each CSA participant assumes. The Temporary Regulations state: “In some circumstances, a party may have less risk as a licensee of intangibles needed in its operations, and so require a lower discount rate, than it would have by entering into a CSA to develop such intangibles, which may involve the party’s assumption of addition risk in funding its cost contributions”¹⁶³ to the development of intangibles. The discount rate should also be adjusted for differences in the risk of how payments are made. For example, the Temporary Regulations state that a royalty based on profit is riskier than a royalty based on revenue, so the discount rate should reflect this risk.¹⁶⁴

¹⁶¹ Treas. Reg. §1.482-7T(g)(2)(iv)(D)

¹⁶² Treas. Reg. §1.482-7T(g)(2)(v)(A)

¹⁶³ Treas. Reg. §1.482-7T(g)(2)(v)(B)(1)

¹⁶⁴ Treas. Reg. §1.482-7T(g)(2)(v)(B)(2)

The additional guidance on discount rates is in some ways an improvement over the 2005 Proposed Regulations. All of the above suggestions are reasonable and consistent with the general principle that risk and reward must be correlated. Nonetheless, they don't provide much specific guidance concerning how a discount rate should be determined. They also add complexity to the process of determining an appropriate discount rate, and are likely to increase IRS/taxpayer disputes over the discount rate. In the *Veritas* case that firm and the IRS reached widely different conclusions concerning the correct discount rate, and these disputes are likely to continue given the lack of specific direction in the 2009 Temporary Regulations.

Acquisition Price Method

A merger triggers the Acquisition Price method. After the acquisition the assets of the acquired firm need to be revalued. 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, unless the firm can demonstrate otherwise. 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."¹⁶⁵ Once the adjusted acquisition price is determined, the buy-in can be calculated.

For example, suppose a U.S. parent corporation, known as USP, organizes a CSA 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

¹⁶⁵ Treas. Reg. §1.482-7T(g)(5)(iii)

another U.S.-based firm, Company X for \$100 million. Company X’s resources consist of its workforce, patents and technology intangibles, and tangible property. USP and Company X file a consolidated tax return, so they are treated as one taxpayer. The resources of Company X are contributed to the CSA. It has \$20M in land and \$10M in liabilities not contributed to the CSA. Under the Acquisition Price method the intellectual property value is \$90 million (the \$100 million purchase price, plus the \$10M in liabilities, and less \$20 million in net assets not contributed to the CSA). As FS expects to realize 50% of RABs, it bears 50% of CSA costs, and it should make a \$45M payment to USP to compensate it for Company X’s external contributions.

Table V: Acquisition Price Method	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

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 determined by securities markets. 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 IP to the CSA, as in the Acquisition Price Method. There is nothing in the regulations that states the Market Capitalization Method must be used if a firm is public, but it would be relatively easy to defend this as the best method available. The acquisition of a privately held firm would not trigger the Market Capitalization method; 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.¹⁶⁶ The apparent purpose is to create a more stable buy-in value. This would make it less likely a firm would contend that unusual stock market activity on the day of an acquisition created an anomalous firm value.

Taxpayers must adjust this figure by the value of assets and liabilities not contributed to the CSA. According to the proposed regulations, "The 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, capabilities or right of the PCT Payee not covered by a PCT or group of PCTs."¹⁶⁷

The arm's length charge for the external contributions is apportioned with Reasonably Anticipated Benefits. The proposed regulations state: "Under the market capitalization method,

¹⁶⁶ Treas. Reg. §1.482-7T(g)(6)(iii)

¹⁶⁷ Treas. Reg. §1.482-7T(g)(6)(iv)

the arm’s length charge for a PCT or group of PCTs covering resources, and rights of the PCT Payee is equal to the adjusted average market capitalization, as divided among the controlled participants according to their respective RAB shares.”¹⁶⁸

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: Market Capitalization Method	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)	
Value contributed to CSA	\$200M	
Buy-in Received (Payment)	\$40M	(\$40M)
Net CSA cost	\$160M	\$40M

¹⁶⁸ Treas. Reg. §1.482-7T(g)(6)(ii)

The Market Capitalization method could be used when a publicly held firm headquartered in the United States formed a CSA with a foreign subsidiary. In addition, according to Femia and Kirmil (2005), “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

As mentioned, the 2009 Temporary Regulations include a Residual Profit Split Method (RPSM) that is substantially different from one outlined in the 1995 Regulations. It is limited to situations in which more than one CSA participant makes significant, non-routine contributions to intellectual property development.¹⁶⁹ Its central concept is that the superior profits from the development and exploitation of intangible assets should be allocated to CSA participants according to each member’s relative contribution. If one participant contributes 60% of the non-routine value, it should receive 60% of present value of non-routine profits.

The 2009 Temporary Regulations provide an example in which two CSA participants each make non-routine contributions to a CSA. The two firms are the US 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. 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”¹⁷⁰ FS’s intangible assets contribute to the non-routine profits earned only in its territory; they do not contribute to non-routine profits earned in the United States.

Kochman (2009) says applying the RPSM method involves three steps (p. 562). First, the present value of non-routine profits for each participant is calculated. Second, this figure needs to be divided among participants based on the proportion of non-routine contributions. Third,

¹⁶⁹ Treas. Reg. §1.482-7T(g)(7)(i)

¹⁷⁰ Treas. Reg. §1.482-7T(g)(7)(v)Example 1

the participants make and receive payments to allocate non-routine profits according to the nonroutine contributions each has made.

Thus to use this method the firm must distinguish between profits attributable to routine contributions and non-routine contributions. An example in the regulations provides an example in which routine costs include the costs of distributing products to customers. Each of the participants is entitled to earn an amount equal to 6% of costs incurred performing these routine activities, based on an analysis of what firms performing similar functions earn for such work.¹⁷¹ The Temporary Regulations state: “The present value of nonroutine divisional profit or loss equals the present value of the stream of the reasonably anticipated residuals over the duration of CSA Activity of divisional profit or loss, minus market returns for routine contributions, minus operating cost contributions, minus cost contributions, using a discount rate appropriate to such residuals...”¹⁷²

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 to the division” (p. 562). The Temporary Regulations discount future profits at a rate of 17.5% rate per annum, and the present value of nonroutine profits earned in FS’s territories is calculated to be \$1.319 billion.¹⁷³

Next, the firms 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% of the value of FS’s marketing intangibles (which only have value in FS’s territory). Consequently, 60% of the nonroutine residual divisional profit is attributable to

¹⁷¹ Treas. Reg. §1.482-7T(g)(7)(v)Example 1

¹⁷² Treas. Reg. §1.482-7T(g)(7)(iii)(B)

¹⁷³ Ibid

USP's platform contribution...''¹⁷⁴ Thus 60% of the \$1.319 billion needs to be paid to USP, and FS retains 40%. This example is summarized below:

Table VII: RPSM method	USP	FS
Nonroutine Contribution	Technology development	Marketing intangibles in FS territories
Return due on routine cost contributions	6% of routine costs	
Return due on nonroutine contributions	Profits discounted at 17.5% per annum	
Present value of nonroutine Profits	US earnings are calculated separately	\$1.319 billion
Value of nonroutine contributions in FS territories	60%	40%
Payment received (due)	\$791 million	(\$791 million)
Profits retained	US earnings plus \$791 million	\$528 million

To summarize this approach, taxpayers should use 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. The CSA participants allocate the remaining profit based on the value of intellectual property contributed. In many cases the costs the costs incurred to develop those external contributions could be used to value those assets, as it can be difficult to determine a reliable method to value the contribution each CSA participant has made.

¹⁷⁴ Ibid

Comparable Uncontrolled Transaction Method

The Comparable Uncontrolled Transaction method is retained in the Temporary Regulations. Taxpayers should evaluate a PCT (buy-in) “by reference to the amount charged in a comparable uncontrolled transaction.”¹⁷⁵ Once that figure is determined it “must then be multiplied by each PCT Payor’s respective RAB share in order to determine the arm’s length PCT Payment due from each PCT Payor.”¹⁷⁶ 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. Therefore the IRS seems to believe it is very difficult, and perhaps impossible, to find a CUT that is close enough in substance to a CSA to make comparisons valid. Thus, as we will see in the *Veritas* case, the IRS ignored CUTs identified by the taxpayer, and advocated the Income Method to value a PCT.

While the IRS may not support CUTs, others still believe they provide valuable information. Keates, Muyelle and Wright (2009) write: “The authors believe that the CUT method remains the best method of evaluating contributions to a cost sharing arrangement, but there is concern that the IRS will be aggressive in determining that CUTs do not meet the comparability standard and cannot be applied. In fact, the preamble to the ...Regulations states plainly that the IRS does not believe that unrelated third parties enter into cost sharing arrangements that are comparable to related party cost sharing arrangements. The authors’ guess that companies that use the CUT method will likely find themselves explaining their method to a Tax Court judge” (p. 171). The IRS may vigorously challenge firms that rely upon CUTs to value intangible assets.

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.

¹⁷⁵ Treas. Reg. §1.482-7T(g)(3)

¹⁷⁶ 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 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.”¹⁷⁷

CSA Adjustments based on Actual Returns

As mentioned, the 2009 Temporary Regulations authorize the IRS to make financial adjustments to CSAs when the returns fall outside parameters it has established. Taxpayers are not permitted to make adjustments to CSAs after the fact. The 2009 Temporary Regulations have narrowed the “safe harbor” proposed in the 2005 Regulations. This is one area in which Temporary Regulations are more restrictive than the 2005 proposal.

The regulations governing these adjustments are quite intricate, and most analysts have concentrated on their key concepts, rather than the precise process by which adjustments are made. I believe this makes sense. The Investor Model gives the IRS considerable power to make adjustments, and latitude to determine when they should be made. Ultimately an organization considering a CSA must ask itself whether the IRS will use its powers judiciously. The process by which an adjustment is made is less important, as the IRS’s powers are broad. For example, one of the most important figures in the Investor Model is the discount rate, and judging an investment’s riskiness requires considerable judgment. The IRS has the benefit of hindsight to determine an investment’s riskiness. If a firm lacks confidence the IRS will use its increased powers prudently, the exact process by which adjustments are made is less important.

In general, the Investor Model evaluates the profits earned by the PCT Payors, or the organizations that make payments for use of intangible assets. The Temporary Regulations

¹⁷⁷ Treas. Reg. §1.482-7T(g)(8)

compare the profits earned by the PCT Payor with its investment to determine whether results should be adjusted. They do not test the profits earned by the PCT Payee, which is the organization contributing intangible assets to the CSA. Thus if a U.S. MNE forms a CSA and transfer intangible assets abroad, the IRS will test the profits earned by the overseas firms to determine if they are excessive. In that situation, the domestic organization's profit will not be evaluated.

Several figures need to be calculated to determine whether the returns are within the safe harbor range. The first is the PCT Payor's Present Value of Total Profits (PVTP). The Temporary Regulations state this figure "is the present value, as of the CSA Start Date...of the PCT Payor's actually experienced divisional profits or losses from the CSA Start Date through the end of the Adjustment Year."¹⁷⁸ Thus this figure is highly dependent upon the discount rate.

The PVTP is divided by the PCT Payor's Present Value of Investment (PVI). The Temporary Regulations state: "the PVI is the present value, as of the CSA Start Date, of the PCT Payor's investment associated with CSA Activity, defined as the sum of its cost contributions and its PCT Payments, from the CSA Start Date through the end of the Adjustment Year."¹⁷⁹ These two figures are used to calculate the Actually Experienced Return Ratio (AERR). The AERR is calculated by dividing the Present Value of Total Profits (PVTP) by the Present Value of Investment (PVI).¹⁸⁰

The Periodic Return Ratio Range (PRRR) is the safe harbor in the 2009 Temporary Regulations. Assuming documentation requirements are met, "the PRRR will consist of return ratios that are not less than .667 nor more than 1.5."¹⁸¹ Thus a firm can earn 50% more than it invested in the

¹⁷⁸Treas. Reg. §1.482-7T(i)(6)(iii)(B)

¹⁷⁹ Treas. Reg. §1.482-7T(i)(6)(iii)(C)

¹⁸⁰ Treas. Reg. §1.482-7T(i)(6)(iii)(A)

¹⁸¹ Treas. Reg. §1.482-7T(i)(6)(ii)

CSA and fall within the IRS safe harbor. The safe harbor range in the 2005 Regulations was .5 to 2.0.

Birnkrant (2009) writes: “the Temporary Regulations introduce the calculation of a ‘Periodic Trigger’ to identify circumstances in which the IRS can exercise its authority under the ‘commensurate with income’ standard of Section 482” (p. 363). During the first five years of a CSA, it is very likely that the AERR will fall below the lower range of the PRRR, so the Periodic trigger will not be activated.¹⁸² Birnkrant (2009) writes: “In addition, if a Periodic Trigger does not occur within each of the first ten years starting with the first tax year in which substantial exploitation of the cost shared intangibles occurs, a Periodic Trigger cannot occur thereafter”¹⁸³ (p. 304). Thus the IRS has at least ten years in which it can make financial adjustments to the CSA.

If the firm has not substantially required with documentation requirements for CSAs, “the PRRR will consist of return ratios that are not less than .8 nor more than 1.25.”¹⁸⁴ The PRRR in the 2005 Proposed Regulations was .67 to 1.5 in this situation. The regulations are designed to encourage taxpayers to comply with documentation requirements, which are considerable. Birnkrant (2009) says: “The breadth and detail of the documents that must be created and maintained are a significant change from prior Regulations” (p. 305). Firms need to document the assumptions used when the CSA is formed, they need to be updated at least annually, and they must be produced within 30 days of an IRS request.

As discussed, the Temporary Regulations give the IRS the sole power to adjust financial results, when the PCT Payor’s AERR falls outside the PRRR. Bhasin (2009) writes: “The regulations reaffirm the use of asymmetric periodic adjustment. That is, when a U.S. parent company sells the rights to certain intangibles to its foreign subsidiary, the IRS will make an adjustment only if

¹⁸² Treas. Reg. §1.482-7T(i)(6)(vi)(B)(2)

¹⁸³ Ibid

¹⁸⁴ Treas. Reg. §1.482-7T(i)(6)(ii)

the buy-in payment from the foreign subsidiary is low. No adjustment would be made if the foreign subsidiary overpays for the rights to the rights to these intangibles” (pp. 1-2). The IRS can adjust results in a variety of ways, including re-determining the intangible development costs, recalculating the allocation of costs between the intangible development activity and other activities, improving the reliability of the method used to calculate the RAB, improving the financial projections used, and allocating any unallocated interest in the cost shared intangible.¹⁸⁵ The 2009 Proposed Regulations state “the Commissioner may make periodic adjustments with an open taxable year (the Adjustment Year) and for all subsequent taxable years for the duration of the CSA Activity with respect to all PCT Payments, if the Commissioner determines that, for a particular PCT (the Trigger PCT), a particular controlled participant ...has realized an Actual Experienced Return Ratio (AERR) that is outside the Periodic Return Ratio Range (PERR).”¹⁸⁶

The process to evaluate returns and make financial adjustments to PCTs is very intricate and detailed. Further, the precise method to determine arm’s length ranges of PCTs can vary between methods, and may involve a number of inputs (discount rate, revenue projections, cost projections, etc.). But when a range of arm’s length transfer prices is calculated, the general rule is that the IRS will adjust the PCT to the median figure calculated. In the preamble to the 2009 Temporary Regulations, the Treasury Department states: “Generally Treas. Reg. §1.482-1(e)(3) governs the Commissioner’s ability to make an adjustment to a PCT Payment due to the taxpayer’s results being outside the arm’s length range. Consistent with the principles expressed there, adjustment under the temporary regulations will normally be to the median.”¹⁸⁷ The precise process by which these calculations are made has not attracted much attention, primarily because most analysts dislike other features in the Investor Model, and doubt whether firms will want to structure new CSAs.

Keates, Muyelle and Wright (2009) summarize the issue well when they write: “Given this uncertainty, and subsequent room for abuse, the periodic re-evaluation that allows the IRS to look back at the outcome of a cost sharing arrangement and reassign shares is especially

¹⁸⁵ Treas. Reg. §1.482-7T(i)(2)

¹⁸⁶ Treas. Reg. §1.482-7T(i)(6)

¹⁸⁷ Preamble to Temporary Regulations, 74 Fed. Reg., No. 2, p. 344, January 5, 2009.

troubling. This violates one of the basic tenets of the arm's length standard, i.e. that transfer prices are set at the outset of a transaction by the taxpayer and should not be based on outcomes. The IRS includes a safe harbour that provides protection against periodic adjustments as long as the present value of discounted returns earned by participants is within a ratio of 0.67 to 1.25 of the discounted value of their contributions. This is not really a safe harbour, however, because the calculation is highly dependent on the discount rates that are used to provide those values, and the discount rates are subject to substantial differences of opinion" (p. 173). A firm may believe its actual results fall with the IRS safe harbor, but if it determines a firm is using a discount rate that is too high, it may still adjust results.

Further, the Investor Model seems might encourage taxpayers to calculate low values for assets contributed to a CSA. If the taxpayer's estimates of intangible assets too high, they cannot revise them down. The IRS is empowered to do so, but it may have little or no incentive to do this. Therefore a taxpayer may be motivated to calculate a low value. As Bhasin (2009) writes: "the asymmetric nature of the adjustment will motivate taxpayers to set the buy-in at the lowest possible price within the arm's-length range and prepare to deal with the dispute because they have nothing to lose" (p. 929).

However the IRS has said it will use its powers fairly, and it will not automatically reduce CSA buy-ins when a PCT Payor's profit levels are above the PRRR. Nadal (2009) writes that IRS international economist Michael McDonald said: "nothing about the application of a periodic adjustment should be mechanical and that it should instead be an exercise in asking what really happened. For example, 'where above-market returns were just due to the cost-sharing risks panning out, there should not be an adjustment,' McDonald said" (p. 681). Since the Investor Model gives the IRS considerable powers, a firm must ask itself whether it believes the IRS will enforce the rules as McDonald states. Birnkrant (2009) says: "As a practical matter, the future use of CSAs will depend upon the Service's approach to enforcement of these Temporary Regulations" (p. 306).

International Perspective on CSAs

While this paper's focus is upon the IRS Investor Model, it should be noted the United States is not the only country in the world to sanction CSAs. A detailed examination of the rules in various countries is outside this paper's scope, but it may be useful to provide international context by reviewing the OECD's guidance on CSAs, due to that organization's international influence.

The OECD's Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations (2010) dedicates one chapter, or approximately fifteen pages, to similar structures. That chapter outlines how related parties should organize cost sharing agreements. They are much less detailed than the IRS regulations, but the general principles are very similar. The guide describes these agreements as ways for related organizations within the same MNE to share the costs and risks of developing intangible property. Those organizations share the costs of creating intangible assets, but they exploit the benefits separately. They should also share costs based on the benefits each organization expects to receive under the agreement. Firms need to make buy-in payments to compensate related parties for intangible assets contributed to these joint working agreements. However the OECD sometimes uses different terms to describe the same idea. The OECD calls these agreements Cost Contribution Arrangements (CCAs) rather than Cost Sharing Agreements. When one firm makes payments to another, these are called "balancing payments" rather than cost contributions.

In addition, the OECD's guidelines lack the details found in the 2009 Temporary Regulations. While the IRS identifies six different methods to value intangible assets, OECD simply says firms should use the arm's length principle to value buy-ins. It provides little guidance beyond that. The OECD also says firms might form CCAs for reasons other than intangible property development, including purchasing property, sharing advertising costs, or creating shared service organizations. Furthermore, the OECD also discusses the idea of a "buy-out" payment, in which one organization leaves the CCA and receives compensation for its contributions. Unlike the IRS Regulations, the OECD guidelines also acknowledge that valuing intangible assets is

inherently challenging. For example, the guidelines state: “It is unlikely to be a straightforward matter to determine the relative value of each participant’s contribution...” (p. 224).

In January, 2011 OECD approved a new project to provide further guidance concerning intangible asset valuation in such agreements, indicating it also considers this to be an important topic. The project is entitled “Transfer Pricing and Intangibles,” and the OECD has formed a working group to analyze this issue and make additional recommendations. It is planning to release a discussion draft by the end of 2013. The OECD’s announcement said this project was needed because: “transfer pricing issues pertaining to intangibles were identified as a key area of concern to governments and taxpayers, due to insufficient international guidance in particular on the definition, identification and valuation of intangibles for transfer pricing purposes” (p. 2). The OECD’s announcement indicates it will address many of the issues covered by the IRS Investor Model.

Veritas

As mentioned, U.S. taxpayers can challenge IRS positions in court. Taxpayers sometimes argue that Treasury Regulations are inconsistent with the IRC, which is the most authoritative source of tax law. Taxpayers may also argue the IRS is not interpreting its Treasury Regulations properly, or that they are inconsistent and/or ambiguous. Thus businesses and individuals also evaluate court rulings to determine a tax strategy. Since its Temporary Cost Sharing Regulations were released the IRS lost two important cost sharing cases, and these rulings may weaken the IRS’s position when it enforces these rules.

In December, 2009 a Tax Court ruled in favor of *Veritas* in its dispute with the IRS, in a ruling that was quite critical of the IRS.¹⁸⁸ Legal experts have different opinions concerning how the *Veritas* decision will impact the 2009 Temporary Regulations, but this decision will not bolster

¹⁸⁸ *Veritas Software Corporation versus Commissioner of Internal Revenue Service*, 133 T.C. 297 (December 10, 2009).

the IRS position; it can only weaken it. The Tax Court favored the Veritas on almost all issues it litigated with the IRS.

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 in 2002 upon 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 and \$4 billion for the intangible assets it contributed to the CSA. The IRS settled on a \$2.5 billion figure, and assessed Veritas-U.S. with \$1.1 billion in back taxes and penalties for failing to value the buy-in properly. Veritas challenged the IRS's position, and the firm had to face a high 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 its cost sharing regulations.

The IRS's problems began before the trial began, as it could not explain what method it used to determine the \$2.5 billion valuation. It also replaced its first economist with a second, Dr. John Hatch. Chung, Hustad and Shapiro (2010) write: "During pretrial proceedings, the IRS abandoned the original analysis and submitted a new analysis that reduced the amount of the buy-in to \$1.675 billion. The new analysis valued in the aggregate all the alleged intangibles and other property transferred to Veritas-Ireland and was based on a discounted cash flow or 'income method' using perpetual life" (p. 12).

In a strongly worded opinion, the Tax Court determined the best method to value the pre-existing intangibles was not the Income Method,¹⁸⁹ but the CUT approach. Criticizing Hatch's analysis, the Tax Court said the economist: "inflated the determination by valuing short-lived intangibles as if they have a perpetual useful life and taking into account income relating to future products created pursuant to the (cost sharing agreement). After an extensive stipulation process, a lengthy trial, the receipt of 1,400 exhibits, and the testimony of a myriad of witnesses, our analysis of whether respondent's \$1.675 billion allocation is arbitrary, capricious or unreasonable hinges primarily on the testimony of Hatch. Put bluntly, his testimony was unsupported, unreliable, and thoroughly unconvincing. Indeed, the credible elements of his testimony were the numerous concessions and capitulations."¹⁹⁰ The court suggested minor modifications to Veritas's approach to determine a final buy-in figure.

The IRS argued the Veritas-U.S. parent essentially sold its intangible assets to the CSA, and this sale created synergistic asset values with perpetual lives. Greenwald (2010) writes: "the IRS contended that Veritas's transfer of pre-existing intangibles was 'akin at a sale' and should be evaluated as such. The IRS further contended that because 'the assets collectively possess synergies that imbue the whole with greater value than each asset standing alone,' it was appropriate to aggregate the controlled actions, rather than value each asset" (p. 259).

The Tax Court concluded this was not the best method to value the intangible asset contribution. Chung, Hustad and Shapiro (2010) wrote: "In disagreeing with the IRS's theory that valuing the transferred intangibles and other property in the aggregate was more reliable, the Tax Court concluded the opposite, because the IRS's approach valued short-term intangibles as though they had perpetual life" (p. 2).

¹⁸⁹ The IRS used the Income Method to value the Veritas CSA, which was formed in 1999. However the Income Method was first articulated by the IRS in 2005, so the firm would have had no way to use that approach. However the IRS argued this was still the best method to value that transaction.

¹⁹⁰ *Veritas Software Corporation versus Commissioner of Internal Revenue Service*, 133 T.C. 297 (December 10, 2009).

Several of the court's criticisms of the IRS have a direct bearing on the 2009 Temporary Regulations. As mentioned, the Tax Court concluded the intangible assets in this case do not have a perpetual life. Oates and O'Brien (2011) write: "The participants do have to pay for the use of the pre-existing intangible property to the extent that the intangible property continues to be used in later generations of new products. At some point, however, new products no longer have anything to do with pre-existing intangible property. And, at some point prior to the pre-existing intangible property no longer being used, the pre-existing intangible property may have lost all value at arm's length" (p. 14). The Tax Court noted that Veritas provided support for its position that the intangibles had a useful life of four years, and that without substantial, ongoing research and development the products would soon be obsolete. In his opinion, Judge Foley noted that even the IRS's economist conceded the firm's products would eventually become obsolete without updates, and that preexisting intangible assets would not provide value indefinitely.

The conclusion that intangible assets have a limited life undercut the remainder of the IRS's position. The IRS used its Income Method to argue that all profits earned above the discount rate should be allocated from Veritas-Ireland to Veritas-US. But if the contributed intangible assets have a limited life, the court determined allocating all residual profits to the U.S. parent is not reasonable.

The Tax Court also ruled that declining royalty rates were appropriate in this case. Chung, Hustad and Shapiro (2010) write: "Based on the evidence, the court noted that unrelated parties that license static technology that is neither subject to updates nor rights to new versions agree to a ramp-down of the royalty over the life of the agreements. Based on comparable agreements, the court then reduced the royalty rates starting in year 2 at a rate of 33% per year" (p. 14). This ruling seems to undermine the IRS position that looking to Comparable Uncontrolled Transactions for guidance is not a valid approach to determine a buy-in.

The IRS and Veritas also disagreed over what figure should be used to discount future profits. The IRS used a 13.7% figure in its calculations, while Veritas used a 20.47% rate. Both used the Capital Asset Pricing Model (CAPM) to calculate the figure, and the IRS and Veritas disagreed on how the risk-free rate, the equity risk premium, and the beta should be calculated. Not surprisingly, 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%. Veritas used an 8.1% figure calculated by Ibbotson Associates for the years 1926-1999. The IRS employed an industry beta, while Veritas used a firm-specific beta. The Tax Court supported Veritas on each figure. Greenwald (2010) wrote: “The court therefore found that Dr. Hatch had used 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).

The IRS ultimately decided not to appeal the *Veritas* decision. But it also said it disagreed with the court’s decision and said the ruling would not change the way it enforces cost sharing regulations (Hustad and Shapiro, 2011, p. 293). This strategy is sometimes used by the IRS when it believes it has a weak case to appeal, based on its specific facts and circumstances. So it may wait for a case in which it believes a better chance for success.

However the key question for this paper is how this ruling impacts enforcement of the Temporary Regulations. Chung, Hustad and Shapiro (2010) write: “The Tax Court’s decision has no direct bearing on those regulations. However, some of the court’s determinations could have an impact upon the interpretation of those regulations. For example, the court’s determination that a valuation using the income method based on a perpetual life that took into account items of income other than preexisting intangibles may be equally applicable in determining the life of transferred prior and contemporaneous transactions under the temporary regulations” (p. 15). As mentioned, while the Temporary Regulations identify certain examples in which intangible assets have limited useful lives, this does not mean the IRS necessarily

believes this is always correct. Thus the Tax Court's decision in this case may bolster a taxpayer's argument their intangible assets have finite lives. Hustad and Shapiro (2011) write: "The additional guidance in the action on decision on intangible property useful life, however, may reduce or eliminate the IRS's assertions of a perpetual life and open the door to meaningful discussions of useful life of preexisting intangibles" (p. 296).

Greenwald (2010) thought this IRS's position was so weak it would have lost it even if it had the support of the Temporary Regulations. He wrote: "Would *Veritas v. Comr.* Have been decided different if the requisite buy-in payment had been controlled by the 2009 Temporary Regulations? Probably not" (p. 263). On the other hand, Hustad and Shapiro (2011) say: "As a practical matter, the IRS's position in *Veritas* is likely to be much stronger when litigated under the temporary regulations" (p. 296). But in either case, the *Veritas* case does not inspire confidence in the IRS, and may make taxpayers reluctant to believe that the IRS safe harbor offers much protection.

Xilinx

Shortly after losing in *Veritas*, in March, 2010 the IRS lost another important case in *Xilinx v. Commissioner*.¹⁹¹ *Xilinx* focused on whether CSAs should include stock-based compensation, such as the cost of employee stock options, in those agreements. After years of litigation, the 9th Circuit Court of Appeals ruled they did not need to be included in CSAs during the years 1997-1999. The case is significant as Court of Appeals' decisions are considered to be quite authoritative, and can only be overturned by the U.S. Supreme Court, which rarely rules on tax cases. However during the years in question cost sharing regulations did not specifically state employee stock costs must be included in CSAs. In 2003 the IRS modified its regulations to state these costs had to be included in CSAs, and this action should bolster the IRS's case, should it be litigated again.

¹⁹¹ *Xilinx Inc. v. Commissioner*, 598 F. 3d 1191, 9th Cir. (March 22, 2010).

Xilinx is a Silicon Valley firm that designs and manufactures integrated circuits and related software products. In 1995 the firm's U.S. parent entered into a CSA with Irish subsidiaries. The participants did not include stock-based compensation costs 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 the Irish subsidiaries. In its argument the IRS cited a Treasury Regulation that said "all costs" should be included between CSA participants.¹⁹² Xilinx provided evidence that unrelated parties that form joint venture agreements similar to CSAs do not share these costs. Xilinx said their case "presents an exceptionally important question: Whether this Court may apply a U.S. transfer-pricing regulation in a way that is 'irreconcilable' with the 'arm's-length standard, when that standard has always been the statutory standard for such transactions under U.S. law" (Greenwald, 2010, p. 116). Beyond this, the arm's length standard is supported countries throughout the world.

The 9th Circuit Court of Appeals first sided with the IRS, and shortly thereafter reversed its position in favor of Xilinx. In its final decision it said the court was confronted with two rules that directly conflicted. On the one hand, cost sharing regulations clearly stated that "all costs" should be included in a CSA, and the cost of stock-based compensation is a research and development cost. But Xilinx also presented evidence that unrelated parties structuring similar joint development agreements do not share those costs. Third parties considered stock option costs to be too unpredictable to include in an agreement, and determined that sharing those costs would not build constructive working relationships between those firms.

The 9th Circuit Court of Appeals said it could resolve this difference in one of two ways. Judge Noonan said one approach would be to conclude that a specific regulation should control a more general rule. This approach would favor the IRS, since its regulations say all costs need to be shared. But in this case Noonan felt the dominant purpose of the regulations should determine the outcome. He wrote: "Purpose is paramount. The purpose of the regulations is parity between taxpayers in uncontrolled transactions and taxpayers in controlled transactions. The

¹⁹² Reg. §1.482-7(A)(d)(1)

regulations are not to be construed to stultify that purpose...” (p. 1197). Thus he concluded the more general arm’s length standard had more importance than the more specific “all costs” regulation, and ruled in favor of Xilinx. This is significant, in that once again courts have looked to the arm’s length standard, rather than cost sharing regulations, to settle a cost sharing dispute. And once again the courts have backed the taxpayer, rather than the IRS.

While the 9th Circuit settled this particular issue, I believe one important issue is frequently overlooked when courts interpret the arm’s length standard. One of the reasons unrelated firms do not share stock option costs is their interests are not aligned. For example, one firm’s share price might increase dramatically, while another firm’s share price might remain stagnant or decline in value. If this happened when two firms formed a joint venture, that organization would absorb stock option costs contributed by only one of the two firms. This would appear to be unjust.

In contrast, the interests of Xilinx and its Irish subsidiary are aligned, and they have a common interest in seeing the firm’s shares appreciate. In this case, sharing the costs appears to be appropriate. Horst (2009) writes: “By contrast, while Xilinx Inc. and Xilinx Ireland may be separate legal entities, Xilinx Inc.’s publicly traded stock reflected the consolidated results of both companies, not the separate results of just the U.S. parent company” (p. 860). Further, Horst says: “If the R&D employees of both cost sharing participants qualify for options of the stock of what is in effect a joint venture company, R&D related ESO costs should be shared in the same way” (p. 861).

Horst’s reasoning is, in my opinion, correct. When courts apply the arm’s length standard, I believe they should do more than simply determine what unrelated taxpayers do; they should also ask why they take those actions. Unrelated firms may not want to share stock option costs, as they might be allocated unevenly. Their interests diverge. In contrast, related taxpayers have a common interest in higher share prices, so their goals are consistent. Thus it makes sense for

them to share such costs. The arm's length standard should not be interpreted mechanically. Courts should not only evaluate what unrelated taxpayers do, they should consider why, and make reasonable distinctions when interpreting the actions of related and unrelated organizations.

While the IRS lost the *Xilinx* case, in 2003 it redrafted its Current Regulations to state specifically that the cost of employee stock options must be included in CSAs. Modifying the regulations significantly strengthens the IRS's case should it be litigated again, particularly if a firm is seeking safe harbor in the cost sharing regulations. Keates, Muyelle and Wright (2009) write: "As is often the case, when the IRS loses in Tax Court, it amends the laws and/or the regulations to obtain results consistent with its litigating position" (p. 167). But if a firm does not seek safe harbor in the Cost Sharing Regulations, the stock option regulation has less authority. A firm could form a CSA but not seek to qualify it under the IRS safe harbor rules. If the IRS challenged its position, it could cite the *Xilinx* decision to support its position, and argue the stock options regulation should not apply. It could argue its approach is consistent with the arm's length standard. In short, a taxpayer might have a much stronger position if it does not seek the IRS safe harbor.

Critique of the Investor Model

The 2009 Temporary Regulations have improved the Investor Model in a number of significant ways. Several of these modifications made it more consistent with ways in which unrelated parties invest assets. Improvements include:

- Recognizing intangible assets may have temporary lives, not permanent value. The 2009 Temporary Regulations acknowledge that in some circumstances intangible asset values expire.
- Permitting declining royalty rates as compensation for intangible assets, at least in some situations. As the IRS accepted that intangible assets may have limited lives, it also

accepts they can decline in value. The Tax Court subsequently supported declining royalty rates in its *Veritas* decision.

- The 2009 Regulations provide better guidance on discount rates, at least in concept. The 2005 Proposed Regulations emphasized use of the Weighted Average Cost of Capital, which suggested that all investments a firm makes are equally risky. The 2009 Temporary Regulations state more clearly a discount rate should be determined by a specific investment's risk. However these conceptual improvements do not mean the Treasury Regulations provide sufficient practical guidance concerning how firms should calculate this figure.
- The 2005 Proposed Regulations placed too much emphasis upon contributions of intangible assets completed prior to formation of the CSA, and too little on the intangible assets created during the course of the CSA. The 2009 Temporary Regulations correct this, and state that platform contributions also include intangible assets created during the CSA's duration.
- Permitting MNEs additional flexibility in the way they apportion markets. As mentioned, the 2005 Proposed Regulations mandated that CSA participants divide their markets into non-overlapping geographic territories. The Temporary Regulations permit CSA participants to divide markets in other ways, such as distribution channels. This additional flexibility is merited, as unrelated businesses sometimes allocate markets in this way.

But in spite of these improvements, there are serious problems with the 2009 Temporary Regulations, and the way the IRS has enforced cost sharing regulations. I would not advise firms to seek safe harbor there. A safe harbor should offer advantages for both the taxpayer and the IRS. In return for complying with IRS rules, the taxpayer should reduce its audit risk and the probability of tax adjustments and penalties. However the 2009 Temporary Regulations do not appear to reduce a firm's risk; in some ways they appear to increase it. Beyond this, since the Temporary Regulations were released the IRS lost the *Xilinx* and *Veritas* cases, and both have established precedents that make the IRS safe harbor less attractive. These decisions indicate courts are more receptive to taxpayer arguments than is the IRS. I would advise firms to avoid IRS qualified CSAs for the following reasons:

- 1) *The IRS argues its Investor Model is needed because CSAs are unique business arrangements, and this makes it difficult or impossible to find Comparable Uncontrolled Transactions (CUTs). However recent decisions demonstrate courts still consider CUTs to be valid, and CUTs sometimes support the taxpayer's position.*

When the IRS first announced its Investor Model, one of its key arguments was that IRS qualified CSAs were unique business arrangements, and there were no comparable business structures between unrelated parties. In its preamble to the 2005 Proposed Regulations the Treasury Department wrote the Investor Model was needed: “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.”¹⁹³ The Treasury Department has said CSAs are unique as firms share costs but exploit benefits separately. Because CSAs are unique, in the IRS’s view, the search for CUTs is fruitless, and the Investor Model is necessary. Keates, Muyelle and Wright (2009) said they believe taxpayers that use CUTs to support buy-in valuations are likely to face court challenges from the IRS (p. 171).

However there are several problems with the IRS’s position. One is that it appears there are business arrangements very similar to CSAs. For example, Dau (2006) noted that GM, DaimlerChrysler, and BMW 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).

¹⁹³ Preamble to Proposed Regulations, 70 Fed. Reg. 51115, Section A. Published in Federal Register August 29, 2005.

Similarly, I have seen several agreements very similar to the ones Dau describes. 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 circuit to HP competitors. The firms developed the integrated circuit together, but profited from the product separately. On another occasion, HP and Oki Semiconductor built a printed circuit board factory in Puerto Rico. The two companies shared the construction costs equally. HP's intended to use the facility to supply its internal needs for printed circuit boards in Puerto Rico, while Oki's goal was to sell its share to external customers. HP planned to sell the products internally at cost, while Oki planned to sell the products to trade customers at market prices. They shared costs equally, and planned to exploit the benefits separately.

Beyond this, in both the *Xilinx* and *Veritas* decisions, courts have resolved tax disputes by looking to the arm's length standard, rather than the IRS's cost sharing regulations. U.S. courts still appear to view the arm's length standard as the most authoritative transfer pricing principle, and use CUTs to resolve transfer pricing disputes. Courts do not appear as willing to disregard what unrelated parties do, simply because the IRS argues that such transactions are only "superficially similar." As mentioned, in *Xilinx* the IRS argued its regulations stated "all costs" must be included in a CSA, and this must include stock option expenses. Xilinx provided evidence that in similar situations unrelated taxpayers did not share stock option expenses. The 9th Circuit Court of Appeals sided with Xilinx, ruling that the dominant purpose of IRC 482 was to treat related and unrelated taxpayers equally. This principle was considered more important than the "all costs" Treasury Regulation. In the *Veritas* case the Tax Court had to determine the best method to value a CSA buy-in. The IRS advocated its Income Method, and Veritas favored CUTs. The Tax Court agreed with Veritas. Reviewing this decision Poniachek (2010) said: "The Tax Court's decision that inexact CUTs could be adjusted to yield the best method could have broad ramifications for transfer pricing applications" (p. 897). Thus businesses may be in a good position to litigate valuation disputes with the IRS, particularly if the firms find reasonable CUTs and value their assets fairly.

- 2) *The Investor Model assumes it is possible to value intangible assets accurately when they are created, or even before they are completed. This is an unrealistic assumption.*

The Investor Model assumes it is possible to value intangible assets accurately when they are created, or even before products are viable. For example, the IRS regulations provide examples in which firms must estimate the cost of completing an investment, as well as revenue, product costs, and operating expenses decades into the future. Firms may need to determine the project's risk and its discount rate. They need to do this before they have completed the product, know whether it is viable, sold one unit, determined who their competition is, and whether they are early or late to market. It is not reasonable to expect a firm to do this accurately. The Tax Executives Institute (TEI) 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" (2005, p. 635).

There are many similar examples. Years ago 3M developed an adhesives technology that later developed into its popular "Post-It" notes. When the adhesive was developed the inventors did not contemplate it would be used to create that product. Even if the inventors thought it could be used to create Post-It notes, no one could have predicted how popular they would become. They were new product category and it is hard to comprehend how future revenue and profit margins could have been estimated reasonably. At the same time, companies often have high expectations for new products that fail. For example, earlier this year HP released tablet computers to compete with Apple's popular iPads. The firm decided to abandon that market and obsolete those products only seven weeks after they were introduced. In short, it is very difficult to determine the commercial potential of new products before they are released. As the court noted in *Xilinx*, taxpayers "are merely required to be compliant, not prescient."¹⁹⁴ The Investor

¹⁹⁴ *Xilinx Inc. v. Commissioner*, 598 F. 3d 1191 9th Cir. (March 22, 2010).

Model is predicated on the false assumption a firm can accurately calculate the future revenue and costs of unproven technologies and products decades into the future.

- 3) *Taxpayers that seek safe harbor in the Treasury Regulations may be giving up their ability to revalue CSA buy-ins based on new information.*

The 1995 Regulations allowed taxpayers to adjust CSA buy-ins when new information became available. As mentioned, Veritas originally valued its CSA buy-in at \$6.3 million, and subsequently increased it to \$118 million. These changes made the buy-in more reasonable and also increased U.S. tax revenue.

The 2009 Temporary Regulations changed this rule. The Investor Model gives the IRS the sole right to adjust CSA buy-ins after the fact. If a firm underestimates the value of a new technology, the IRS is empowered to increase the buy-in. If the firm overestimates the value of a new technology, it does not have the authority to revise that figure. Taxpayers face a real disadvantage. They must value a CSA buy-in accurately long before they have sufficient information to do this. In addition, this may incentivize some to undervalue the buy-in.

The 2009 Temporary Regulations put the IRS in a stronger position if disputes are litigated. The taxpayer has only one chance to value the CSA buy-in accurately, at its inception. The IRS has several chances to get it right, and it has the benefit of hindsight. This puts the IRS in a very advantageous position vis-à-vis the taxpayer, and I believe it increases the taxpayer's risk. As Birnkrant (2009) says: "the playing field is uneven to the extent that the IRS can use perfect hindsight and periodic adjustments to revisit the pricing of platform contributions that produce successful cost shared intangibles" (p. 306).

If a firm does not seek the safe harbor in the 2009 Temporary Regulations, it has a stronger position that it has the authority to make such changes. Firms can rely upon the “commensurate with income” standard in IRC 482, and argue they have the right to make such adjustments, which they have had in the past. The ability to adjust CSA buy-ins when additional information is available is an important tool, one that firms may be giving away if they agree to form an IRS qualified CSA. In the *Veritas* case, the courts determined its \$118M buy-in was more reasonable than the IRS’s \$1.675 billion figure. But if *Veritas* had been bound by its original \$6.3 million figure, perhaps courts would have ruled against that firm.

- 4) *The IRS gives far too little guidance concerning how discount rates should be determined, which diminishes the value of the safe harbor.*

As mentioned, in several ways the 2009 Temporary Regulations give taxpayers better conceptual guidance concerning how discount rates should be determined. They place less emphasis on the WACC, allow firms to determine project specific discount rates, and identify other ways in which discount rates should reflect risk. But the *Veritas* case demonstrates the practical difficulties firms and the IRS may have agreeing upon discount rates. The IRS said 13.7% was the appropriate discount rate, and *Veritas* calculated 20.47%. A seven point difference can create large 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 how discount rates should be determined. 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 guidance than this. When the Investor Model was first announced the Tax Executives Institute 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 do not address this issue.

The regulations could specifically state that discount rates should be determined by using CAPM, which was used by both the IRS and Veritas in that case. I recognize that CAPM is not universally accepted, but it is the best model available and it provides structure and guidance, which both taxpayers and the IRS need. The regulations could specifically state how firms should calculate the risk-free rate of return, which might be the 30-day Treasury bill rate, the figure used by Veritas. Perhaps the studies by Ibbotson Associates, which the Tax Court referenced in its *Veritas* decision, could be used to determine the equity risk premium. The Treasury Regulations could also propose a process to determine a CSA’s beta. In *Veritas*, the IRS used an industry beta, and the court agreed with Veritas that a firm-specific beta was a better approach. The IRS could suggest a process to determine a firm-specific beta. The regulations might also state that if a firm is investing its assets to enter a different industry, it could use the beta from that industry to determine the appropriate beta. 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 topic. Without improved direction on discount rates, I am not sure why a firm would want to structure an IRS qualified CSA.

5) *The Investor Model is very sensitive to minor changes in financial assumptions, and small changes in assumptions can have large financial consequences.*

Discounted cash flow/profit analysis is very sensitive to the financial assumptions used. This can be demonstrated by using one of the IRS’s own examples included in its Temporary Regulations. I will use the same example that was used to explain the Residual Profit Split Method.¹⁹⁵

¹⁹⁵ Treas. Reg. §1.482-7T(g)(7)(v)Example 1

In that example, a US Parent (USP) and its Foreign Subsidiary (FS) collaborated to create and market a new, highly portable storage device. USP owned all the rights to the U.S. market, and it formed a CSA to market the product internationally. The U.S. Parent developed the product and contributed the technology. FS contributed marketing intangibles. The firm determined that 60% of the overseas value was contributed by the technology and 40% by the marketing intangibles. The Temporary Regulations provided estimates of the cost to complete the project, revenue and growth rate estimates, and a variety of cost estimates. Future profits were discounted by 17.50%. Present Value of Total Profits in overseas markets was estimated to be \$1.319 billion. Since USP contributed 60% of the value, FS owed it \$791 million for those contributions.

To determine how sensitive the Investor Model is to minor changes in assumptions, I used the IRS revenue, cost and discount rate assumptions to recreate the IRS's results. Using its figures, I calculated the PVTP to be \$1.27 billion, which is within 4% of the IRS's calculations. I did not have access to the IRS model, and had to make several assumptions in my calculations, which may account for the difference. In any case, my objective was to determine how sensitive the Investor Model is to minor changes in assumptions, and this difference does not affect that objective. The comparisons that follow are based on my calculation that the PVTP was \$1.27 billion.

Three assumptions were changed. First, the IRS assumed a discount rate of 17.50% in their analysis. I increased the discount rate to 20.47%. This was the discount rate Veritas used and the Tax Court supported. In that case the IRS and the taxpayer used discount rates that differed by approximately seven percentage points, so this change was significantly less than the difference in that case. And the 20.47% rate may not be unreasonable, as both Veritas and the hypothetical firm in the IRS example both produced high capacity, storage management products.

Second, I assumed the firm fell 10% short of the IRS revenue estimates each year. For example, the IRS calculations assumed product revenue would peak at \$1.806 billion by year ten, and I reduced this figure to \$1.626 billion in that year. I believe any organization capable of projecting revenue ten years in the future that accurately would be doing this extraordinarily well.

And third, the IRS assumed that routine costs, which would include the cost of the product, plus distribution and selling expenses, would be 45% of revenue. I increased this figure to 50% of revenue. Again, this seems to be within the margin for error, and forecasting results that accurately would be a remarkable achievement.

Using these assumptions, the Present Value of Total Profits decreased from \$1.27 billion to \$491 million, a 61% decline. This would reduce the payment for intangibles by \$466 million, to \$295 million. Thus relatively minor changes in assumptions can have a large impact upon PVTP, and thus the CSA buy-in figure. The IRS and taxpayer might also reach different conclusions concerning how much value each CSA participant contributed. If we assumed the USP contributed only 55% of the value, rather than 60%, the PCT payment would drop to approximately \$270 million, a decrease of 65% from the original figure. In short, relatively minor changes in assumptions about revenues, costs and discount rates, along with the value contributed by each CSA participant, can cause substantial changes to the buy-in. This may make firms reluctant to form an IRS qualified CSA, particularly since the IRS insists it is the only organization empowered to change CSA buy-ins, and it provides little practical guidance on discount rates.

Conclusion

The 2009 Temporary Regulations have improved the Investor Model in a number of respects. They recognize that valuable intangible assets are created during the course of a CSA. They also back away from unreasonable positions that intangible assets always have infinite lives, prohibit declining royalty rates, and require firms to divide markets into non-overlapping geographic territories. And in some ways they improve guidance on discount rates, though further improvements are needed.

Despite these improvements, I believe there are two important ways in which the Investor Model should be improved. First, the IRS should allow taxpayers to adjust CSA buy-ins when new information becomes available. If the IRS insists it has the sole right to change CSA buy-ins after the fact, it gives that organization too much power, and thus makes CSAs much less attractive to taxpayers. Valuing intellectual property at the time it is created is inherently very difficult to do, and requiring taxpayers to determine this figure accurately at inception is unreasonable. It also may encourage some taxpayers to undervalue buy-ins, since they have no opportunity to revise this figure down. In other situations it can also reduce U.S. tax revenue. As mentioned, Veritas increased its buy-in from \$6.3 million to \$118 million when more information became available.

Second, the IRS needs to improve discount rate guidance. Its “choose the appropriate discount rate” approach provides too little taxpayer direction. The IRS might suggest that taxpayers use the Capital Asset Pricing Model, which both Veritas and the IRS used in that case. It can outline a process by which firms can calculate the risk-free rate of return, the equity risk premium, and a beta to use. Again, without such guidance, I am not sure why taxpayers would want to structure new, IRS qualified CSAs. 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.

As the regulations are currently drafted, I would not recommend that firms structure new, IRS qualified CSAs. Because the regulations give the IRS additional powers, and its guidance on discount rates is so general, a taxpayer needs to believe the IRS will enforce its powers fairly if they seek the IRS safe harbor. Unfortunately, the IRS’s track record does not inspire confidence, particularly in the *Veritas* case. The IRS argued for a \$2.5 billion CSA buy-in, and reduced that figure when it could not state what method it used to calculate that figure. Nearly one year after the 2009 Treasury Regulations were released the IRS argued intangible assets have unlimited lives, against declining royalty rates, and used questionable methods to determine discount rates. Veritas persuaded a Tax Court the IRS’s position was arbitrary, capricious and unfair. If a firm

seeks safe harbor in the 2009 Temporary Regulations, it may be giving important rights to the IRS, and it has no assurance the IRS will use its powers in a fair and even-handed manner.

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).

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).

Kochman (2009) agrees, writing: “New CSAs will, however, have to jump through a number of hoops and will be subject to potentially onerous periodic adjustment rules for at least 10 years” (p.555). He also says “Although the Temporary Regulations include a number of taxpayer-friendly modifications to the Proposed Regulations, they retain the periodic adjustment rules that many taxpayers and practitioners have argued effectively eliminate any substantial upside a non-US participant might gain from participating in a CSA. That being the case, the new rules are

likely to discourage many taxpayers from incurring the substantial upfront costs necessary to enter into a CSA” (p. 563).

Based on the above, I would not advise firms to seek safe harbor in the 2009 Temporary Regulations. I acknowledge that this approach may increase certain taxpayer risks. The IRS may be more likely to challenge a firm’s position, as it is not protected by the safe harbor. But at the same time, the safe harbor does not appear to provide much protection. The Investor Model requires tremendous foresight to project financial results accurately, and this is difficult to do. And even if a firm believes it has done everything to operate within the safe harbor, the IRS may still determine a firm used the wrong discount rate, and adjust the CSA buy-in.

The IRS appears to have a much stronger position when supported by the Temporary Regulations, which may discourage taxpayers from seeking safe harbor there. The IRS can adjust CSA buy-ins after the fact, while the taxpayer is bound by its first estimate. If litigated, the IRS’s valuation may appear to be much more reasonable to a court. The regulations also discourage the use of CUTs. They specifically state stock option costs must be included in CSAs. The taxpayer seems to have a better case when it does not seek safe harbor, and turns to the courts and the arm’s length standard. It has important legal precedents to support its position, in the *Xilinx* and *Veritas* decisions.

While courts appear more taxpayer-friendly than the IRS, to win in court firms must demonstrate the IRS is arbitrary, capricious and unfair when it enforces its rules. This is a high legal standard, so it involves risk. If disputes are taken to court, a firm also faces large legal expenses. But on balance, it seems to me that the U.S. legal system is more receptive to taxpayer arguments than is the IRS, and I would prefer to rely upon the arm’s length standard than the 2009 Treasury Regulations. Further, a firm can reduce its risk by not taking overly aggressive positions in a CSA. It can use its powers to adjust CSA buy-ins if its investments are very successful, and create reasonable values the IRS will be less likely to challenge, and can sustain legal challenge.

So firms do have ways to manage and reduce their audit risk without seeking the IRS safe harbor.

Negotiating an Advanced Pricing Agreement (APA) with the IRS is another way a firm could reduce its risk. In an APA, a taxpayer and the IRS agree upon a firm's transfer pricing policies, and the IRS monitors compliance with the APA. Birnkrant (2009) says: "An alternative is to protect against a challenge to the valuation and periodic adjustments through an APA.

Taxpayers will need to decide whether the cost of an APA and the time required to secure the APA are worth the benefit of eliminating the ongoing risk and uncertainty" (p. 306). Since the *Xilinx* and *Veritas* decisions were reached, it appears to me taxpayers are in a stronger position to negotiate a reasonable APA, and the IRS should recognize this.

To summarize, I believe the IRS's Investor Model does not offer an attractive safe harbor for taxpayers. It shifts important powers towards the IRS, and it provides too little guidance on discount rates. Further, the IRS has taken unreasonable positions since the Temporary Regulations were released, which undermines its credibility and assurances it will use its powers judiciously. Given the *Veritas* and *Xilinx* decisions, a taxpayer might find other ways to reduce its audit risk. One approach would be to negotiate an APA with the IRS, and use the recent court decisions to support its negotiating position. If this approach is not successful, a firm can still structure a CSA, but it will need to be prepared to demonstrate that its provisions are consistent with the arm's length standard. A firm using this approach could reduce its audit risk by valuing its assets in a conservative, fair, reasonable, and defensible manner.

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