

# An Overview of Academic Tax Accounting Research Drawing on U.S. Multinational Taxation<sup>1</sup>

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**ABSTRACT:** Economics-based tax research in accounting draws heavily on the Scholes and Wolfson framework. The framework develops a global approach to tax planning where all parties, all taxes, and all costs are to be considered in effective tax planning. Effective tax planning is distinct from tax minimization as the goal of the former is to maximize the after-tax rate of return. The first empirical applications of the framework followed the passage of the Tax Reform Act of 1986. Taxation of multinationals has long been of interest to accounting (and other) researchers and continues to be of interest. The Tax Cuts and Jobs Act of 2017 changed many tax laws including how the U.S. taxes U.S. multinationals. Research examining the ramifications of this latest Tax Act is already well under way.

Keywords: Effective tax planning, tax avoidance, cash effective tax rates, income shifting

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## I. INTRODUCTION

This keynote address focusses on tax research within the accounting field. As an area of research, tax is a subfield within the broader accounting field.<sup>2</sup> All methodologies can be found in tax but the predominant methodology is archival empirical with over 90 percent of papers using this approach. I would describe most of the research as being descriptive or positive in approach rather than normative or prescriptive. The general questions we address are: Do taxes matter? If not, why not? If so, how much? Most but not all of our research addresses whether taxes matter in some business decision. Examples include organizational form choice such as flow through (limited partnership, general partnership, limited liability partnership, limited liability corporation, S corporation, real estate and investment trust among other choices) or “double taxation” where income is taxed first at the entity level and then at the investor level (often with deferral until distributed), what entity structure to establish if the choice is flow through, how to fund the business (debt vs equity), where to locate the business (domestic or foreign), whether to purchase or lease assets, how to compensate employees including pension plans, how to expand (via internal investment or through mergers and acquisitions and then how to create a tax efficient structure for M&A transactions). While many might think that because taxes are a direct cash outflow to the firm that they would matter in all business decisions – that is, they would have a first-order effect but in fact we find, as I illustrate below, that many other factors come into play depending on the decision context.

There are three general types of tax planning: converting income from one type to another, shifting income from one period to another, and shifting income from one jurisdiction (tax pocket) to another. In each case, the objective is to shift income from high tax to low tax. For individuals, this means converting income from high-taxed ordinary income to lower-taxed capital gains. For corporations, it means converting capital gains (taxed as ordinary income to corporations) to dividends which are tax-favored to the corporate recipient due to the dividend received deduction. Taxpayers have incentives to shift income from one period to another whenever the statutory tax rate schedule changes – as in the recent Tax Cuts and Jobs Act of 2017 when the top corporate statutory tax rate was lowered from 35% to 21%. Finally, shifting income from a high tax jurisdiction, e.g., the U.S., to a lower taxed jurisdiction such as Ireland or Singapore or even a tax haven is a strategy regularly highlighted in the media and a focus of much tax accounting research.

Similar to Ball and Brown (1968) and Beaver (1968) providing legitimacy to financial accounting, tax research gained legitimacy through the work of Scholes and Wolfson in the 1980s, which became known as the Scholes and Wolfson framework for analyzing tax planning. I discuss the Scholes and Wolfson framework in the next section, followed by a brief discussion of early tax research using the framework in Section III. Section IV discusses research examining the taxation of U.S. multinationals. Section V contains a brief discussion of the Tax Cuts and Jobs Act (2017), especially as it applies to taxation of U.S. multinational firms. Section VI contains some brief concluding remarks.

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<sup>2</sup> I deliberately restrict myself to discussing research conducted by accounting academics. As noted by Hanlon and Heitzman (2010) “Tax research has a long history in many disciplines” (p. 127). Hanlon and Heitzman integrate economics, finance, and law research into their review of tax research.

## II. THE SCHOLES AND WOLFSON FRAMEWORK

Scholes and Wolfson developed an MBA class at Stanford University in the early to mid 80's entitled Taxes and Business Strategy. The class was well received and with funding from Ernst and Young (now EY) they ran a summer tax class for several years and invited interested faculty from round the U.S. They formalized their teaching notes in their textbook Scholes and Wolfson (1992) that not only provided analyses but also discussed research they were conducting. Revised editions of the text and the class are taught at many universities in the U.S.

The key element of the framework is that effective tax planning is not the same as minimizing taxes. Rather, taxes are one element of the cost structure of a business, and the goal is to maximize the after-tax rate of return. The framework is recognized by the mantra: all parties, all taxes, all costs. All parties is meant to highlight that in any transaction there are two (or more parties) that through negotiation might be able to set the price of the transaction (the terms of trade) such that one or both parties are made better off through lowering taxes. Common examples are executive compensation in corporations, M&A transactions, and lease vs. buy decisions.

All taxes refers not only to explicit taxes but also implicit taxes that arise in a transaction or investment. The common example used to explain implicit taxes is interest on municipal bonds which is tax exempt at the federal level whereas interest on corporate bonds is taxable to the investor/lender. If both bonds promise the same pre-tax cash flow (the nominal interest on the face value of the bond, say 10% per annum), then because the cash flow (interest) on the municipal bond is tax exempt, investors will be willing to pay more for these bonds, bidding up the price of the bonds thus lowering the pre-tax rate of return. The lower pre-tax rate of return represents an implicit tax on the municipal bond relative to the higher pre-tax return on the corporate bond. The municipal bond is referred to as a tax-favored asset. Closely related to implicit taxes is the concept of clienteles (e.g. dividend tax clienteles). Low-explicitly taxed investors will be attracted to heavily-explicitly taxed investments because this will maximize their after-tax rate of return while highly-explicitly taxed investors will be attracted to lightly-taxed, i.e., tax-favored, investments. An example that brings all parties and all taxes together is preferred stock. Low-taxed firms needing capital cannot take full advantage of the tax deduction of interest on corporate debt, but if they issue preferred stock to other corporations, the dividends on the preferred stock are tax-favored to these other corporations because of the corporate dividend received deduction, which allows corporations to exclude a large percentage of the dividends from taxable income. That is, preferred stock is a tax-favored investment to high-tax paying corporations, and they will bid up the price resulting in a lower pre-tax rate of return (resulting in an implicit tax to the buyer). The lower pre-tax rate of return lowers the cost of preferred stock to the issuing company such that the after-tax cost (= pre-tax cost as dividends are not tax deductible to the issuer) of preferred stock is lower than the after-tax cost of issuing debt.

The third element in effective tax planning is all costs. Tax planning is not costless and in any decision context, all costs must be considered. The list of costs includes the fees paid to tax planners (either in-house tax departments or outside consultants), legal fees to write up contracts, possible legal fees to defend challenges by the tax authorities, IRS penalties and interest if the tax position is overturned, reputation and political costs of being identified as a tax avoider, and the

effects of the tax plans on the financial statements, including reported earnings. In a classic early paper illustrating these concepts, Scholes, Wilson, and Wolfson (1990) examined banks holding of municipal bonds. For me as a tax researcher, this paper ranks with Ball and Brown (1968) and Beaver (1968).

Ed Maydew in a discussion many years ago graphically illustrated the framework with chickens crossing the road (an example I have used repeatedly in my talks).<sup>3</sup> Why did the chicken cross the road? Because taxes are lower on the other side of the road. Then Ed showed a slide with some chickens on each side of the road, with the question: Why didn't all the chicken cross the road? His final slide shows a chicken in the middle of the road with a large truck bearing down on it, indicating that crossing the road (i.e., tax planning) can be costly. The Scholes-Wolfson framework helps us think about tax planning and what to think about when examining some particular research question. The framework is not really a rejectible theory. As Ed Outslay famously noted in one of his talks, you have to love the framework: whatever you find is consistent with the framework. If you find taxes matter – great. If you find that taxes do not matter, then there must be large non-tax costs.

### **III. EARLY RESEARCH IN TAX**

Early research in tax by accounting academics exploited the changes in the Tax Reform Act of 1986 (TRA 86) which lowered the top statutory tax rates for both individuals and corporations but widened the tax base for corporations. This natural experiment gave rise to many studies some of which looked at intertemporal income shifting – deferring corporate taxes given the reduction in the top statutory tax rate.<sup>4</sup> However, income shifting (accelerating expenses, deferring revenue) also affects the other party (or parties) to the transaction and these parties might also want to defer revenue and accelerate expenses which requires both parties to consider the other party.

A large body of literature examined the role of financial reporting in tax planning and examined why more firms did not cross the road – participate in some plan that lowered explicit taxes. Often times, the cash tax savings arose from deferring taxes so the firm still had to recognize, without discounting, these taxes in its tax expense as a deferred tax expense accrual with the result for U.S. GAAP purposes that there was no tax savings showing up on the income statement. And when you add some of the other expenses such as transaction costs to the mix which show up as expenses lowering pre-tax income, with unchanged tax expense, reported earnings are actually lower even though the transaction cash flows are net positive for the period. Thus, financial reporting issues around tax planning gave rise to the book-tax trade-off literature which documents that firms often leave tax savings “on the table” if there is any non-positive effect on book income. This book-tax literature is summarized in Shackelford and Shevlin (2001). Multinational income shifting also was a topic of interest in the 1990s (see for example, Harris 1993 and Klassen, Lang, and Wolfson 1993). The next major tax act after TRA 86 was the American Jobs Creation Act of 2004 (AJCA) which enacted a temporary tax holiday for U.S. multinationals, allowing them to repatriate foreign earnings back to the U.S. at a reduced U.S. tax rate. A representative study is Blouin and Krull

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<sup>3</sup> See Maydew (2001) for his published discussion.

<sup>4</sup> See for example, Scholes, Wilson, and Wolfson (1992), Guenther (1994), and Maydew (1997).

(2009) who study the incentives to repatriate under the Act. This Act stimulated further research of U.S. multinationals which I discuss below.

In 2008, Dyreng, Hanlon, and Maydew published a paper examining whether firms can maintain low taxes for extended periods of time. They introduced the cash effective tax rate (ETR; cash taxes paid divided by pre-tax book income) into the literature.<sup>5</sup> These authors followed up with a paper in 2010 using managerial fixed effects to show that individual top managers are associated with firm's cash tax avoidance incremental to controlling for other firm characteristics. Thus, was borne the "tax avoidance" literature as it is known today. This area exploded with nearly every tax researcher having one or more papers examining the determinants of cross-sectional variation in firms' cash ETRs. Most of these papers do not reference the Scholes-Wolfson framework, but nevertheless the framework is in the background because many of the determinants can be classified as non-tax costs, or effects of other parties, and even implicit taxes. Wilde and Wilson (2018) and Bruhne and Jacob (2019) both provide an excellent summary of this literature. These determinants or areas of research look at family firms, the role of executive compensation, public vs private firms, the role of institutional ownership, corporate governance, managerial characteristics, tax enforcement, reputation, links to governments through state ownership and or government contracting, distance to the nearest IRS office, size of auditor-provided tax services, size of the tax department, effect of country-by-country reporting, and the effect of adoption of IFRS, with a new paper emerging weekly. This is a saturated field.

There are also a number of papers examining the consequences to firms of their tax-avoidance behavior. Among the consequences examined, Hasan, Hoi, Wu, and Zhang (2014), and Shevlin, Urcan, and Vasvari (2020) show that the cost of debt increases as a result of tax avoidance. Goh, Lee, Lim, and Shevlin (2016) find that the cost of equity decreases with non-aggressive tax avoidance. Donohoe and Knechel (2014) show that audit fees increase with firms' tax avoidance.

I believe the Scholes and Wolfson framework is still as important today as it was when it was developed 35 years ago. The framework can help us structure our thinking and it has proved invaluable in my own work responding to questions such as why all firms were not already minimizing their taxes. The answer is because minimizing taxes is not the same as effective tax planning which takes into consideration all parties, all taxes, and, importantly, all costs. Thus, if something changes in the environment such that some cost has changed then we would expect a change in affected (i.e., treated) firms' tax planning.<sup>6</sup>

#### **IV. U.S. MULTINATIONAL TAX PLANNING: SELECTED RESEARCH**

Before discussing research in this area, it is important to understand how U.S. multinationals are taxed on their foreign earnings. There are two general types of taxation: worldwide taxation and territorial taxation (these can be viewed as extremes along a continuum). In a territorial tax system, earnings in the home country of the multinational are taxed but earnings in foreign countries in

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<sup>5</sup> Dyreng et al. (2008) was awarded the American Accounting Association 2020 Distinguished Contributions to Accounting Literature Award.

<sup>6</sup> Just as in other empirical studies in economics, finance, and accounting, researchers now must often try to establish causality between the hypothesized X variable and the tax outcome. Hence the search for exogenous shocks or quasi-experimental settings in the tax field.

which the multinational firm operates are not taxed by the home country (but obviously the foreign country will subject the earnings to tax in their country). In a worldwide system, the multinational firm's worldwide earnings are taxed in the home country. However, to avoid double taxation, the home country often allows a tax credit for foreign taxes paid on the foreign earnings. Additionally, often the foreign earnings are not taxed in the home country until the earnings are repatriated as a dividend. Until the Tax Cuts and Jobs Act of 2017, U.S. multinational firms were subject to a worldwide system but with deferral until repatriation with a foreign tax credit.

A simple example illustrates the two systems. Assume a U.S. multinational faces a U.S. tax rate of 35% and its Irish subsidiary a tax rate of 12.5%. Further assume the Irish sub earns \$800 and pays \$100 in Irish tax in the current period. If the firm repatriates 100% of the aftertax income, then the incremental U.S. tax is  $\$700/(1-.125)[.35-.125] = \$180$ . The first term grosses up the dividend to the pretax Irish earnings of \$800, and the second term is the U.S. tax rate less the foreign tax rate reflecting the foreign tax credit. The total tax paid is  $\$100 + \$180 = \$280$ , the same amount as if the income was earned in the U.S. (.35 times \$800). If the Irish sub repatriates zero of the current aftertax income, then future U.S. taxes will be \$180 in the period of repatriation, assuming no change is the U.S. statutory tax rate. If the firm faced a territorial tax system, there would be no incremental taxation in the parent (home) country in the current period or any future period when the earnings are repatriated. The total tax is thus the Irish tax of \$100.

Does this U.S. repatriation tax influence firms' repatriation versus reinvestment decisions? Hartman (1985) developed a simple model to analyze this decision. If a firm repatriates the amount Div in the current period, the amount it will have after U.S. incremental taxes is given by

$$\text{Div} - \{\text{Div}/(1-t_f)[t_{us} - t_f]\} = \text{Div}(1 - t_{us})/(1 - t_f)$$

where  $t_{us}$  ( $t_f$ ) is the U.S tax rate (foreign tax rate). If this amount is invested in the U.S. for n periods at the after-tax rate of return  $r_{us}$  it will grow to an after-tax accumulation of

$$\{\text{Div}(1 - t_{us})/(1 - t_f)\}(1 + r_{us})^n$$

If the firm does not repatriate in the current period, but reinvests for n periods in the foreign country earning an after-tax rate of return  $r_f$ , and then repatriates, the after-tax accumulation at the end of n periods, is given by

$$\text{Div}(1 + r_f)^n - \{\text{Div}(1 + r_f)^n/(1 - t_f)\}[t_{us} - t_f] = \{\text{Div}(1 - t_{us})/(1 - t_f)\}(1 + r_f)^n$$

Inspection of the two terms for the after-tax accumulations shows that the decision boils down to comparing  $r_{us}$  with  $r_f$ . If  $r_{us}$  is greater than  $r_f$ , repatriate now and invest in the U.S. The repatriation tax is irrelevant as it will either be paid now or in the future.

The Hartman model makes several important assumptions. First, it assumes the firm is eventually going to repatriate the earnings and thus they will be subject to incremental U.S. taxation when repatriated.<sup>7</sup> Second, it assumes the U.S. tax rate and foreign tax rates are intertemporal constants.

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<sup>7</sup> A large part of U.S. multinational tax planning in the 1990s and 2000's was how to get the foreign earnings back to the U.S. without paying the incremental U.S. tax. This gave rise to complex M&A tax planning – however, each time

Firms might delay repatriation if they expect a decrease in the future taxes due on repatriation. This reduction could occur via a temporary tax holiday as in the AJCA 2004 previously mentioned, a reduction in the top U.S. statutory corporate tax rate, or a change in the way the U.S. taxes foreign earnings – both of which occurred in the recent TCJA 2017 (which I will return to below). Thus, it is an empirical question whether repatriation taxes influence firms to keep foreign earnings (and cash) overseas. Foley, Hartzell, Titman, and Twite (2007) examine this question using Bureau of Economic Analysis data collected by the Bureau from surveys about foreign operations that U.S. multinationals are mandated to complete. Foley et al. find that U.S. multinational foreign (and worldwide) cash holdings are increasing in estimated U.S. repatriation tax costs, but that U.S. cash holdings are not associated with estimated U.S. repatriation tax costs. They interpret their findings as repatriation tax costs lead firms to keep cash overseas and that foreign and U.S. domestic cash holdings are not substitutes. These results gave rise to the term “trapped cash” or “locked out earnings.”

The Hartman model ignored any financial accounting effects of the repatriation decision. Under deferred tax accounting, the deferral of the incremental U.S. tax on foreign earnings would be recognized as a deferred tax expense increasing the total tax expense. In the Irish example earlier, the firm would accrue \$180 of U.S. incremental taxes reducing consolidated reported earnings by this amount. However, under APB 23 (now Accounting Standards Codification ASC 740-30), firms can designate foreign earnings as indefinitely reinvested (aka permanently reinvested earnings) if they have no plans or no need to repatriate. When classified as indefinitely reinvested, the firm does not have to accrue the incremental U.S. taxes thus reducing the total tax expense on the income statement thus increasing the after-tax reported earnings. An example from Microsoft Corporation shows the magnitude of this financial reporting benefit. In 2016 (prior to the TCJA 2017 tax law changes), Microsoft shows a reduction in its GAAP ETR of 19.4% (20.9% in 2015) due to “foreign earnings taxed at lower rates.” Microsoft discloses that these lower rates arise from operations in Ireland, Singapore, and Puerto Rico. Microsoft additionally discloses that as of June 30, 2016 (the end of its fiscal year), they had not provided deferred taxes on \$124 billion of foreign earnings “which are permanently reinvested outside the U.S.” The firm further disclosed that the unrecognized deferred tax liability was \$39.3 billion. One can invert the calculation of the incremental tax due to solve for the average foreign taxes paid on the foreign earnings. Such a calculation gives an average foreign tax rate of 4.8% which is much lower than the statutory tax rates in Ireland and Singapore!<sup>8</sup>

The importance of this financial reporting benefit is highlighted in Graham, Hanlon, and Shevlin (2011). Graham et al. surveyed tax directors of U.S. businesses with the aid of the Tax Executives Institute (which resulted in a response rate of 26%). They asked the tax directors to provide an importance score (1-5 with 5 very important) on three factors in their investment location

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Treasury or the IRS identified such a plan it was immediately shut down. See Martin, Rabier, and Zur (2015) and Harris and O’Brien (2020) for further discussion.

<sup>8</sup> Many firms do not report the unrecognized U.S. incremental taxes (see Ayers, Schwab, and Utke 2015). Microsoft also discloses that \$108.9 billion of its cash, cash equivalents and short-term investments is held by the foreign subs. But 83% of this \$109 billion is actually held in U.S. government securities. The cash is in the U.S. but because U.S. taxes have not been paid on it, the firm cannot use it to invest in real assets in the U.S. nor distribute it to shareholders.

decisions. They partitioned public firm respondents into high R&D and low R&D firms as high R&D firms can more easily shift income overseas via transfer pricing. Results show that 57 (43) percent of high (low) R&D firms rated the foreign tax rate as important or very important, and 57 (36) percent of high (low) R&D firms rated the deferral of U.S. cash taxes as important or very important. Sixty (35) percent of high (low) R&D firms rated financial accounting expense deferral under APB23 as important or very important. They also asked the tax directors to rate the importance of various factors in the decision to repatriate versus reinvest overseas. Close to 65 percent of the high RD firms rated financial accounting expense deferral under APB23 as important or very important which percentage slightly exceeded the percentage rating of U.S. cash tax deferral.<sup>9</sup> Using responses from the same survey, Graham, Hanlon, Shevlin, and Shroff (2014) report the response to the question: Which metric is more important to top management in your company? The cash ETR, the GAAP ETR, or both are equally important. Just over 50% of private firms ranked the cash ETR as most important, while 48% of public firms ranked the GAAP ETR as more important. Close to 40% of public firms ranked them as equally important, leaving just over 10% of public firms ranking the cash ETR as more important. Thus, these survey results clearly show the importance of financial accounting in public firms' decision-making around real decisions such as the investment location and repatriation decision.

Given the tax and financial accounting benefits of reporting income in lower-taxed jurisdictions, one method to shift profits is via transfer pricing on intercompany transactions. Several studies examined income shifting around the TRA 86 (see Klassen, Lang, and Wolfson 1993, and Harris 1993). There is a resurgence in academic interest in income shifting over the past decade. See Klassen and Laplante (2012); Beuselinck, Deloof, and Vanstraelen (2015); Dyreng and Markle (2016); De Simone, Klassen, and Seidman (2018); and De Simone, Mills, and Stomberg (2019).

Responding to income-shifting concerns, in 2013 the Organization for Economic Co-operation and Development (OECD) announced a new initiative to address perceived transfer pricing abuses, the Action Plan on Base Erosion and Profit Shifting (BEPS). After years of work, OECD finalized and published the action plan, which includes 15 actions that countries can take to combat BEPS. One action, country-by-country reporting, requires firms to provide tax authorities with detailed financial information such as revenue, income, taxes paid, employment, tangible capital, etc. on a country-by-country basis. As of 2018, over 70 countries have adopted country-by-country reporting, including the U.S. Researchers are examining whether country-by-country reporting reduces income shifting (see Hanlon 2018, and De Simone and Olbert 2019).

With firms not repatriating much of their foreign earnings, several studies examine whether the “trapped cash” is being suboptimally invested, a non-tax cost of tax avoidance. Hanlon, Lester, and Verdi (2015) find that U.S. firms with higher estimated repatriation tax costs are more likely to make foreign acquisitions. They find no relation between repatriation tax costs and domestic acquisitions. Hanlon et al. also find there is a negative relation between the repatriation tax cost and the market return around the acquisition announcement. They interpret their results as consistent with suboptimal investments consistent with agency costs between the firm and its

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<sup>9</sup> Blouin, Krull, and Robinson (2012) provide archival empirical evidence consistent with the survey results.



shareholders. Edwards, Kravet, and Wilson (2016) find that U.S. firms with high trapped cash make acquisitions with lower announcement stock returns, and report lower future buy and hold returns, and lower future return on assets. Amberger, Markle, and Samuel (2020) show that affiliates of parent firms facing worldwide taxation exhibit less efficient investment behavior where investment efficiency is estimated by regressing capital expenditures on proxies for growth. Amberger et al. interpret their results as consistent with agency costs between the firm's top U.S. management and foreign managers arising from information asymmetry between the two sets of managers. Finally, Bird, Edwards, and Shevlin (2017) find that the probability of an acquirer of a U.S. multinational being foreign is increasing in the lockout effect of repatriation tax costs. Additionally, they find that the probability of the foreign acquirer being located in a territorial tax system is increasing in the lockout, but there is no association for foreign acquirers located in worldwide systems. These studies document a negative outcome of the U.S. system of worldwide taxation.

Harford, Wang, and Zhang (2017) examine whether investors assign a discount to foreign cash either because of the repatriation tax costs, implying a dollar of foreign cash holdings is not the same as a dollar of domestic cash, and/or inefficient use of the foreign cash. Harford et al. (2017) find that foreign cash is discounted relative to domestic cash. However, this result assumes an efficient market in which investors correctly impound the future consequences to the firm of having trapped cash. Chen, Chiu, and Shevlin (2020) test this assumption. They find that the mapping (aka persistence) of current period changes in foreign cash into one period ahead earnings is the same as the mapping for changes in domestic cash. This result is consistent with the magnitude of agency problems, to the extent they affect future earnings, being similar between domestic and foreign operations. Chen et al. then show that changes in foreign cash, but not domestic cash, predict one-year ahead stock returns. This return predictability is consistent with investors mispricing foreign cash: They underestimate the persistence of the changes in foreign cash into future earnings.

## **V. THE TAX CUTS AND JOBS ACT OF 2017**

In response to the generally held belief that U.S. multinational firms suffer a competitive disadvantage because of the high U.S. statutory tax rate and the worldwide tax system, Congress enacted the Tax Cuts and Job Act (TCJA) in late 2017. Among many changes, the Act reduced the top corporate statutory tax rate from 35% to 21% and changed how the U.S. taxes the foreign earnings of U.S. multinationals from a (hybrid) worldwide to a (hybrid) territorial system by exempting dividends repatriated from U.S. owned foreign subsidiaries from U.S. taxation. Of course, moving to a territorial system still offers (some might argue increases) the incentive to shift income out of the U.S. into lower-taxed jurisdictions, eroding the U.S. tax base of these firms.<sup>10</sup> Income shifting can occur from legitimate shifting of operations to foreign jurisdictions, shifting income via transfer pricing, and by the U.S. firm borrowing from foreign subs located in low-taxed foreign jurisdictions. Economists and tax legislators are well aware of these incentives and enacted several provisions to protect against base erosion: BEAT (Base-Erosion and Anti-

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<sup>10</sup> Markle (2016) finds the firms domiciled in a territorial tax system shift more income into low tax jurisdictions than firms domiciled in worldwide tax systems.

Abuse Tax), GILTI (Global Intangible Low-Taxed Income), and FDII (Federal-Derived Intangible Income).

BEAT is a type of minimum tax. Firms are required to add back to their regular U.S. taxable income deductible payments from the U.S. to their foreign affiliates (excluding purchases of inventory from the foreign affiliates). This alternative taxable income is then taxed at 10%. GILTI is a type of add-on tax. Basically if the profit margin is “too high” on foreign operations (defined as foreign pre-tax return on tangible assets greater than 10%), then the excess GILTI is added to the firm’s U.S. taxable income less a 50% deduction, with the result that the GILTI income is effectively taxed at 10.5% (.50 times 21%) and the firm is allowed a limited tax credit for foreign taxes paid on this income.<sup>11</sup> Note that there is no deferral of the tax, GILTI income in the current period is taxed in the current period and is independent of any repatriation. Thus, the label hybrid territorial is attached to the new system, although some might argue the system is still a hybrid worldwide tax system. BEAT and GILTI have been labeled the “sticks” to address base erosion. TCJA also included a “carrot,” the FDII. Basically, a lower U.S. tax rate is applied to income reported in the U.S. if the income is deemed based on sales generated from intangible assets. The lower rate arises because firms are allowed a deduction for 3/8 of their FDII resulting in 5/8 being taxed giving an effective tax rate of 13.125% on income classified as GILTI (5/8 times 21% = 13.125%). This provision encourages firms to sell direct from the U.S. rather than through a lower-taxed foreign affiliate. Each of these provisions results in a complex calculation that adds complexity to the tax code.

A natural question in adopting the territorial system is: What happens to all the pre-2017 accumulated foreign earnings? The Act included a “transition tax” on accumulated foreign earnings. Foreign earnings held in non-cash assets (cash assets) are subject to a 10% (15%) tax which is to be paid over 8 years: Thus, these accumulated foreign earnings did not escape taxation. The reduction in the top tax rate plus the transition tax gave rise to interesting tax adjustments in the financial statements. Under U.S. GAAP, firms have to “value” their deferred tax assets and liabilities using the tax rate at the financial reporting date. Firms with large deferred tax assets (that were not offset by valuation allowances) thus had to write down the value of these assets increasing the tax expense on the income statement increasing their GAAP effective tax rate and lowering after-tax net income. General Motors in its 2017 10-K states “We recognized the tax effects of the Tax Act in the year ended December 31, 2017 and recorded \$7.3 billion in tax expense which relates almost entirely to the remeasurement of deferred tax assets to the 21% tax rate.” GM’s total tax expense for the year was \$11.5 billion indicating the revised valuation of the deferred tax assets had a major effect on GM’s tax expense and reported earnings. The transition tax on unremitted foreign earnings also had to be recognized in tax expense in 2017, increasing the tax expense on the income statement and again increasing the GAAP effective tax rate and lowering after-tax net income. Both Microsoft Corporation and Alphabet (parent of Google) reported a 37% higher

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<sup>11</sup> GILTI applies to all foreign income, not just intangible based, but it is expected to impact firms with income largely arising from intangible assets, including technology firms such as Microsoft, Apple and Google and large pharmaceutical firms. These firms can shift high margin income overseas at relatively low cost with relatively small investment in tangible assets, resulting in a high pre-tax return on tangible assets.

GAAP effective tax rate due to the transition tax resulting in a 54% GAAP ETR for both companies, even though the statutory tax rate decreased from 35% to 21%.

Other important provisions affecting businesses are the qualifying business income deduction for qualifying pass through entities as these entities would otherwise have faced the still high individual tax rate. This provision is complex and affects the organizational form choice. The net operating loss (NOL) rules changed so that NOLs could no longer be carried back but must be carried forward (with no limit on the carryforward period) and the NOL deduction in any period was limited to 80% of taxable income. A limit on the deductibility of interest was also imposed, which impacts the capital structure (debt/equity) choice and a limit was placed on the tax deductible amount of executive compensation.<sup>12</sup>

With these tax changes, tax researchers have a new set of data to test their theories, to examine how firms responded including unintended consequences, and assessing the effectiveness of the changes. It seems that a new working paper examining the effects of TCJA appears weekly.<sup>13</sup>

## VI. CONCLUSION

Much accounting tax research is conducted using the Scholes-Wolfson framework. The framework emphasizes that effective tax planning is not the same as tax minimization: After all, the easiest way to minimize taxes is to earn no income but of course this is a very poor plan and does not maximize after-tax rate of return. There are three elements to consider in effective tax planning which Scholes and Wolfson refer to as a global tax planning approach: all parties, all taxes, and all costs.

The framework was developed in the early to mid 80's just before the passage of the Tax Reform Act of 1986. This Act offered a quasi-experimental setting to apply the framework especially to examine financial reporting costs related to tax planning. In the past decade, two major streams of tax research have emerged. First, there are numerous examining the cross-sectional determinants of the distribution of cash ETRs. Cash ETRs are a proxy for the outcome of tax planning with most studies using the term tax avoidance. There are a number of different outcome measures of tax planning/avoidance and as Hanlon and Heitzman (2010) point out, it is important for researchers to link their empirical measure to the conceptual construct of interest: aggressive tax avoidance, risky tax avoidance, and tax planning through temporary and/or permanent differences. Second, much attention has been paid to taxation of multinational companies, especially shifting income across different tax jurisdictions to save taxes. The Scholes-Wolfson framework is used to help structure and interpret the results even if an individual study does not explicitly reference the framework.

The Tax Cuts and Jobs Act of 2017 with its numerous changes offers the opportunity for researchers to address many interesting questions, including not only how firms responded but

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<sup>12</sup> In response to the shutdown of the economy during the pandemic, the CARES Act (2019) temporarily suspended the restrictions on NOL carrybacks and interest deductibility.

<sup>13</sup> See <https://tax.unc.edu/index.php/what-do-we-know-about-the-effects-of-the-tax-cuts-and-jobs-act/> for a listing and summary of research papers examining the effects of TCJA 2017.

also the magnitude of the responses and the effectiveness of the various rules. Of course, there will also be unintended consequences of the law changes which will play out over time. The more interesting studies will go beyond documenting the obvious. Numerous researchers are already examining outcomes associated with the 2017 Act and there is a rush to publication – to be the first as numerous researchers are examining the same issue. However, there are only two full years of post-Act data, and I believe it is too early to properly address some research questions. Applying the Scholes-Wolfson framework, it is costly to renegotiate contracts and it takes time for firms to adjust operations and contracts (such as executive compensation, location of operations) such that it will be several years before we get a clear picture of the outcomes of many of the tax law changes. Moreover, the many changes in the Act and its general applicability renders it difficult, in some settings, to identify treated and control firms making it difficult to obtain causal or near-causal inferences about any specific rule change.

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