#### Real Effects of International Tax Planning Incentives: Evidence from Domestic Acquisitions

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#### ABSTRACT

This paper examines whether the tax haven subsidiary profiles of U.S. acquirers and targets affect M&A pairing. Using disclosed material subsidiary data, we develop two measures of tax haven subsidiary relatedness between the acquirer and its target. Examining the associations of these measures with the probability of merger pair formation, the results suggest that acquirers are more likely to select targets whose subsidiaries are located in tax havens similar to their own, consistent with economies of scale in tax planning. This relation suggests that firms' past tax planning decisions have significant effects on their future real corporate decisions.

**Keywords:** Tax Planning, Tax Havens, Mergers and Acquisitions **JEL Classifications:** G34; H25; M41

#### **1. Introduction**

This study investigates whether firms' past tax planning decisions influence their real corporate behaviors by considering domestic mergers and acquisitions (M&A). Extent research has examined the link between aggressive tax planning and financial reporting incentives (Frank, Lynch, and Rego, 2009; Lennox, Lisowsky, Pittman, 2013); and the valuation implications of aggressive tax planning to shareholders (Wilson, 2009) and debtholders (Hasan, Hoi, Wu, and Zhang, 2013). Relatively little attention has been paid to whether aggressive tax planning has an effect on corporate operating, investment, or financing decisions, often referred to as "real" effects. This paper examines domestic M&A as a possible channel through which firms' past tax planning may affect corporate behavior. Specifically, using acquirers' existing subsidiaries in particular tax havens as a proxy for their past tax planning activities, we examine whether and how U.S. acquirers take the U.S. targets' subsidiary operations in tax havens into account when engaged in target selection in M&A.

By acquiring a domestic target, the acquirer not only gains control of the target but also of the target's subsidiaries located in foreign countries, including tax havens.<sup>1</sup> For example, when the acquirer does not have subsidiaries in tax havens, the acquisition of a target with tax haven subsidiaries will result in the acquirer having subsidiaries in those jurisdictions. This feature of M&A allows us to examine whether acquirers' past tax planning, as measured by their existing operations in tax havens, influences their preferences on the targets' subsidiary locations, when engaged in target selection. If so, will acquirers tend to acquire targets with similar or different tax haven locations? An acquirer may prefer a target with subsidiaries located in tax

<sup>&</sup>lt;sup>1</sup> Tax havens are jurisdictions that impose no or nominal taxes and offer themselves as places to be used by nonresidents to escape taxes in their country of residence (OECD, 1998). According to the Congressional Research Service, jurisdictions that are considered as tax havens include Bermuda, Cayman Islands, Hong Kong, Singapore, and Luxembourg (Gravelle, 2010). Dyreng, Lindsey, and Thornock (2013) find that Delaware serves as a domestic haven for firms to avoid taxes. The focus of this paper is on tax havens located in foreign jurisdictions.

havens where the acquirer already has subsidiaries if tax compliance and planning costs decrease in the size of the activity in a given jurisdiction (the economies of scale hypothesis; Grubert and Slemrod, 1998; Mills, Erickson, Maydew, 1998; Rego, 2003; Slemrod and Blumenthal, 1996; 2002). Alternatively, will acquirers tend to acquire targets that allow the firms to diversify their subsidiary presence in different tax havens (the diversification hypothesis)? An acquirer may prefer a target with subsidiaries located in tax havens where the acquirer does not already have subsidiaries if having subsidiaries in different tax havens allows the firm to be more flexible in tax planning and to reduce transfer pricing risk (Bucovetsky, 2014; Klassen and Mescall, 2013). Notwithstanding the above conjectures, acquirers may not consider targets' subsidiary locations in tax havens to be relevant because tax planning opportunities are not likely to be the driving force behind an acquisition transaction.

Although our research question is focused on international tax planning, we have chosen to undertake the study in the research setting of domestic M&A. Domestic M&A offer a powerful research setting for observing the effects, if any, of international tax planning incentives. Prior research suggests that changes in shareholder protection laws and corporate governance systems through cross-border M&A have significant valuation implications for firms (e.g., Bris, Brisley, and Cabolis, 2008; Rossi and Volpin, 2004). Transactions between U.S. acquirers and targets allow us to hold the country-level governance systems unchanged and therefore mitigate concerns such as the lack of control for country-level economic incentives for the transactions (e.g., shareholder rights, accounting standards, and legal regimes, etc.). Also, our research design involves the formation of a pool of potential merger participants as the control sample. Due to the data limitations in identifying matched control firms for foreign targets, the cross-border M&A setting may not be practical in our case. Thus, we believe domestic M&A provides the best setting for our research question.

Our full sample consists of 437 acquirer-target pairs from M&A transactions announced between 1995 and 2010. To create a pool of potential merger participants as the control sample (pseudo mergers), we identify up to five matched acquirers and matched targets for each acquirer and target, respectively, by matching on deal announcement year, industry, and firm size. As noted in Bena and Li (2013), this matching procedure allows the clustering of M&A activities in time and industry. To address our research question, we develop two proxies to measure the degree of diversity and overlap of tax haven subsidiaries between the acquirer and target. The sample firms' subsidiary information is based on their disclosed material subsidiaries in the Exhibit 21 of the 10-K reports (Dyreng and Lindsey, 2009).

To assess the relatedness of acquirers' and targets' subsidiaries, we create proxies for the degree of diversity and of overlap. The diversity proxy measures the proportion of new tax haven subsidiaries that the acquirer gains from an acquisition. The overlap proxy measures the extent to which the subsidiary tax haven locations of the target overlap with that of the acquirer.<sup>2</sup> The results indicate that the diversity and overlap measures are significantly negatively and positively associated, respectively, with the probability of a merger pair formation. These findings suggest that acquirers prefer targets with subsidiary presence in tax havens similar to their own, consistent with the economies of scale in tax planning hypothesis. The results are robust to non-tax alternative explanations. For example, other observed geographic pattern such as member countries of the Organisation for Economic Co-operation and Development (OECD) or European Union (EU) do not exhibit similar relations to merger pair formation.

<sup>&</sup>lt;sup>2</sup> While it may appear that these two measures are negatively correlated, as described more fully below, differing denominators and the inclusion of zeroes leads to a small positive correlation.

Finally, we explore the association between the number of tax haven subsidiaries and whether the firm is part of an M&A pair. Controlling for the number of subsidiaries in countries other than tax havens, we show that the number of tax haven countries in which the company has a subsidiary is related to the firm being an acquirer, but has no reliable association with the firm being a target. We interpret this evidence as the tax planning activities of the acquirer are influential in its own future decisions.

This paper makes two contributions to the literature. First, it contributes to the new and growing literature on the real effects of tax avoidance behavior (e.g., Blouin, Devereux, and Shackelford, 2012; Graham and Tucker, 2006; Hanlon, Maydew, and Saavedra, 2013). In a review of tax research, Hanlon and Heitzman (2010) state that while "the effects of taxes on real corporate decisions are at times difficult to document, they are important to examine... research in this area...will provide important contributions over the next era" (p. 42). This study finds that the similarity of subsidiaries across tax havens between the acquirer and target is a significant determinant of domestic merger pairing. This evidence suggests U.S. multinationals' past global tax planning structures shape their real corporate decisions in a way that is consistent with economies of scale in tax planning (Grubert and Slemrod, 1998; Mills et al., 1998; Rego, 2003; Slemrod and Blumenthal, 1996; 2002). Considering the relatedness of a U.S. acquirer's and a U.S. target's tax haven subsidiary operations as a tax-related attribute of an acquisition, this paper also sheds lights on the long stream of literature that examines the role of taxes on the structure of both domestic and cross-border M&As (e.g., Arulampalam, Devereux, Liberini, 2012; Auerbach and Reishus, 1988; Ayers, Lefanowicz, and Robinson, 2004; Erickson, 1998; Huizinga and Voget, 2009; Scholes and Wolfson, 1990; Shih, 1994).

Second, there is a considerable amount of research on tax planning by U.S. multinationals dating back to the 1990s (e.g., Collins, Kemsley, and Lang, 1998; Hines and Rice, 1994; Klassen, Lang, and Wolfson, 1993) and continuing to the present (Desai, Foley, and Hines, 2006; Dyreng and Lindsey, 2009; Klassen and Laplante, 2012a). These studies have generally focused on the role of low-tax jurisdiction operations in facilitating U.S. multinationals' tax planning; under-explored is the question of how these firms invest in tax planning strategies in general, and expand their tax haven subsidiary operations in particular. This study shows that domestic acquisitions can be a viable channel that allows U.S. acquirers to grow their operations in tax havens.<sup>3</sup> Our paper adds to a broader literature on target selection in M&As (e.g., Bena and Li, 2013; Hoberg and Phillips, 2010; Rhodes-Kropf and Robinson, 2008) and is also closely related to current studies that suggest tax avoidance to be one potential driver for M&As (Belz, Robinson, Ruf, and Steffens, 2013; Col and Errunza, 2012).<sup>4</sup>

This paper proceeds as follows. Section 2 reviews the setting and develops hypotheses. Section 3 proposes the research design and describes the sample selection process. Section 4 presents the empirical results. Section 5 concludes.

#### 2. The Role of Tax Haven Operations in U.S. Multinationals' Tax Planning

#### 2.1 U.S. Taxation of Foreign Income and the Role of Tax Havens

The U.S. worldwide system of taxation generally exempts foreign earnings from U.S. tax liability until they are repatriated. When the foreign earnings are repatriated, the U.S. taxpayers

<sup>&</sup>lt;sup>3</sup> This paper examines whether the acquirers' and targets' tax haven subsidiary profiles affect M&A pairing, *conditional* on the acquirers' decisions to participate in a domestic M&A, a research question that is different from existing research on the economic determinants of multinationals' entry modes into foreign countries (e.g., Barkema and Vermeulen, 1998; Brouthers and Brouthers, 2000; Harzing, 2002; and Nocke and Yeaple, 2007). The question of firms' optimal entry into tax havens is beyond the scope of our study.

<sup>&</sup>lt;sup>4</sup> Col and Errunza (2012) find that cross-border merges that involve tax haven targets and acquirers generate significantly lower merger-announcement abnormal returns to both the targets and acquirers, relative to a control sample of transactions with both parties from non-haven countries.

can claim foreign tax credits for income tax paid to foreign governments up to the amount that would otherwise be due had the income been earned in the U.S.<sup>5</sup> This deferral of U.S. taxes on repatriation provides incentives for U.S. multinationals to shift income away from the U.S. to low-tax jurisdictions such as tax havens to avoid taxes. For example, General Electric (GE), one of the largest U.S. multinationals, reported 2010 U.S. profits and worldwide profits of \$5.1 and \$14.2 billion, respectively, but paid little, if any, U.S. federal income tax (Sloan and Gerth, 2010; Kocieniewski, 2011). A multinational can shift income to foreign subsidiaries in a variety of ways, including transfer pricing, debt location, and cost allocation.<sup>6</sup> Each of these techniques affects the calculation of the parent's and subsidiary's income, as well as the combined entity's worldwide tax bill.

Prior research has documented extensive evidence that U.S. multinationals use tax havens to avoid taxes.<sup>7</sup> For example, Harris, Morck, Slemrod, and Yeung (1993) find that U.S. multinationals with a subsidiary in a tax haven, Ireland, or one of the "four dragon" Asian countries report lower U.S. tax liabilities; while firms with a subsidiary in a high-tax jurisdiction report higher U.S. tax liabilities. Hine and Rice (1994) document a similar pattern consistent with tax-motivated income shifting in a sample of U.S. multinationals having subsidiary operations in one of the big seven tax havens (Hong Kong, Ireland, Liberia, Lebanon, Panama, Singapore, and Switzerland). Altshuler and Grubert (2003) and Desai, Foley, and Hines (2003) show that multinationals with profits in low-tax jurisdictions can use tax havens to facilitate deferral of U.S. taxes through a variety of ownership arrangements. Through the analysis of

<sup>&</sup>lt;sup>5</sup> See, for example, Klassen and Laplante (2012a) for a fuller discussion of the international taxation of U.S. firms.

<sup>&</sup>lt;sup>6</sup> Transfer pricing involves amounts charged by one part of a company for products and services it provides to another part of the same company. Firms can also shift income across jurisdictions by strategically locating debt or expenses in high tax rate countries (Huizinga, Laeven, Nicdeme, 2008; Newberry and Dhaliwal, 2002).

<sup>&</sup>lt;sup>7</sup> Desai et al. (2006) report that 59 percent of U.S. multinational firms with significant foreign operations have subsidiaries in at least one tax haven; In terms of revenue implications for the U.S., Clausing (2011), for example, estimates that the use of tax havens by U.S. multinational corporations cost the U.S. Treasury a revenue loss of \$90 billion in 2008.

affiliate-level data on U.S. multinational firms, Desai et al. (2006) find that the primary use of affiliates in larger (smaller) tax haven countries is to facilitate reallocation of taxable income (deferral of U.S. repatriation tax). Foley, Hartzell, Titman, and Twite (2007) find that U.S. multinational firms hold significant amount of cash abroad and that the extent of cash held abroad is associated with repatriation tax burdens, results that are consistent with U.S. multinational firms hiding profits offshore for tax reasons. Dyreng and Lindsey (2009) show that, on average, U.S. firms with at least one material foreign operation located in a tax haven country face a worldwide tax burden that is 1.5 percentage point lower, a number that translates into about \$64 billion fewer taxes for those firms over the sample period. Klassen and Laplante (2012a) report that U.S. multinational firms were more active at shifting income out of the U.S. during 2005-2009 relative to 1998-2002 due to varying regulatory costs of income shifting. In sum, there is substantial evidence in the literature that U.S. multinationals use tax havens to reallocate income away from high-tax jurisdictions and defer repatriation taxes on income from low-tax jurisdictions.

#### 2.2 The Role of Targets' Tax Haven Subsidiaries in Domestic M&As

Prior research has shown that international tax considerations influence firms' acquisition decisions and the returns to target shareholders. These studies, however, have mainly focused on cross-border M&A activities. For example, Scholes and Wolfson (1990) find that changes in tax regime in the 1986 Tax Reform Act increased the volume of cross-border acquisitions of US targets by foreign acquirers. Huizinga and Voget (2009) present evidence that international double taxation of foreign-source income reduces the likelihood of parent firm location in a country following a cross-border transaction. Arulampalam et al. (2012) show that the likelihood of a firm becoming a target decreases as the statutory tax rate in the target country increases.

Extant literature also suggests that takeover premium in cross-border M&A is reduced by the non-resident dividend withholding taxes imposed by the target country (Huizinga, Voget, and Wagner, 2008) and transfer pricing risk (Bucovetsky, 2014; Klassen and Mescall, 2013).

While this stream of research has demonstrated different aspects of international tax considerations can have an effect on cross-border M&A, the potential effects of international taxes on domestic M&A are less clear. This paper takes a new approach by employing the cross-sectional differences in firms' subsidiary profiles, or in particular, firms' tax haven subsidiary profiles, as a source of variation in international tax planning activity to investigate whether and how the U.S. acquirers' past tax planning is related to their target selection decisions.

If a U.S. firm is going to undertake a domestic acquisition, will the firm consider the potential targets' mixes of subsidiary locations, including tax haven subsidiaries, to be among its important selection criteria? Performing an early review of the deal's tax efficiencies, such as the target's transfer pricing model and its potential risks or synergies created with the acquirer's own model could increase the value of the transaction (Ernst & Young, 2013). If that is the case, will the acquirer prefer a target with subsidiaries present in tax havens similar to its own to facilitate growth of its existing subsidiaries? Alternatively, will the acquirer prefer a target with subsidiaries?

Firms incur significant fixed costs associated with tax planning because of the complexity of the tax code. Examples of fixed costs of tax planning include within-firm personnel costs such as the recruiting of key and experienced personnel for tax planning and non-personnel costs such as the investment in accounting information system necessary to implement effective tax planning.<sup>8</sup> Studying tax-related compliance costs, Slemrod and Blumenthal (1996) conducted a confidential survey that collects tax-related expenditures information for large and mid-size U.S. firms. The authors estimate that the total tax-related expenditures for their sample firms amount to \$2.085 billion, or 2.7% of the firms' total tax paid in 1989. Slemrod and Blumenthal (1995) report that about 40% of the total tax-compliance costs are related to the U.S. system of taxing foreign-source income. Slemrod and Venkatesh (2002) conducted a similar survey in 2000 and estimate that firms' total tax-related expenditures amounts to as high as 29.6 percent of the firms' tax paid, a figure that has increased by 11 times in about a decade. Due to the increasingly significant costs of tax planning, executives at small and medium-sized firms have reportedly passed on tax breaks and credits that their firms are entitled to claim (McKinnon, 2012). Thus, larger firms are expected to benefit from economies of scale in tax planning relative to smaller firms. Discussed below, existing research provide both theoretical and empirical and analytical support to the existence of economies of scale in tax planning.

Grubert and Slemrod (1998) develop an economic model to examine income shifting behaviors of U.S. multinationals. The critical feature of their model is that the cost of a given amount of income shifting decreases as the real operating capital located in the foreign jurisdiction increases. The authors also provide empirical results consistent with their predictions that income shifting advantages are the predominant reason for U.S. investment in Puerto Rico. Using a firm's tax department salaries and fees paid to external tax-related service providers (e.g., attorneys and accountants) collected from the aforementioned survey to measure firm-level tax compliance costs, Slemrod and Blumenthal (1996) find a significantly positive association between firm size and tax compliance costs, after controlling for firm-level tax complexity such

<sup>&</sup>lt;sup>8</sup> Bauer (2012) and De Simone, Ege, and Stomberg (2012) find that a significant number of tax material weaknesses arose from reasons related to resource constraints such as insufficient personnel with adequate tax knowledge.

as industry, number of entities, and tax litigation. In particular, across different proxies of firm size (i.e., the firm's worldwide employment, assets, and sales), the coefficients on firm size is significantly greater than 0 and less than 1 in magnitude, results that are consistent with the economies of scale prediction. Using data from the same survey, Mills et al. (1998) also present empirical evidence that larger firms incur significantly lower average costs of tax planning. Rego (2003) revisits the economies of scale in tax planning hypothesis and finds that firms with greater pre-tax income have lower effective tax rates, suggesting that firms with greater U.S. pre-tax income avoid more income taxes than other firms. Gallemore and Labro (2013) argue that firms without a high quality accounting information system in place to facilitate an efficient flow of internal information can impair their ability to avoid taxes. In a survey of tax executives from 219 multinational firms, Klassen, Lisowsky, and Mescall (2013) find that transfer-pricing-related tax minimization is related to greater tax resources overall, more experienced tax personnel, and employing more resources on transfer pricing tax planning, findings that are consistent with the existence of economies of scale in tax planning.

The empirical findings documented in these studies and in particular, the analytical result of Grubert and Slemrod's (1998) model suggest that, in the context of this study, the marginal cost of tax planning (income shifting) decreases as the size of the subsidiary located in a particular tax haven increases. That relationship implies that, relative to firms with a disperse subsidiary tax haven presence, firms with a more concentrated subsidiary tax haven presence may have a lower tax-related costs both in terms of tax compliance (such as lower costs of documentation of tax working papers to the IRS) and tax planning (such as lower costs of information coordination related to tax planning across geographic segments). The lower tax compliance costs can also allow the tax department's resources to be allocated to pursuing tax planning opportunities (Gallemore and Labro, 2013). All in all, the economies of scale in tax planning hypothesis predicts that, relative to the acquisition of a target with a dissimilar tax haven presence, the acquisition of a target with similar tax haven subsidiary presence could lead to a lower subsequent tax planning costs for the merged firm, all else equal.<sup>9</sup>

While perhaps not as strong, there are also reasons to believe that acquirers may prefer targets with tax haven subsidiary locations different from their own. Relative to adding another subsidiary in the same tax haven, adding new tax haven jurisdictions may increase the firm's flexibility in tax planning and diversify tax risk. Having access to a greater number of tax haven jurisdictions provides firms with more options to implement tax planning. A popular (infamous) example of tax planning arrangements that require presence in multiple tax havens would be the Double Irish Dutch Sandwich plan. Helping U.S. multinationals such as Google to avoid billions of income taxes every year (Drucker, 2010), this tax avoidance strategy requires subsidiary presence in all three countries: Bermuda, Ireland, and the Netherlands. In addition, given the constantly changing rules and requirements in transfer pricing, having subsidiary presence in multiple tax haven jurisdictions will help also reduce tax-haven-specific transfer pricing risk (Bucovetsky, 2014; Klassen and Mescall, 2013)

Notwithstanding the above arguments, it is also quite possible that acquirers do not consider the potential target's subsidiary locations to be relevant. Tax planning characteristics are unlikely to be the driving force for a particular acquisition target, and there are other ways to establish subsidiaries in tax havens. For example, Jansen Egbert, Vice President of Tax at

<sup>&</sup>lt;sup>9</sup> Dyreng, Lindsey, Markle, and Shackelford (2013) find that U.S. multinationals are more likely to structure foreign operations in country pairs that have a bilateral tax treaty to reduce taxes levied on dividends paid between commonly controlled entities. However, even if the tax benefits of this foreign subsidiary structure exceed the non-tax costs, it is unclear if acquirers would prefer targets with similar or dissimilar subsidiary presence in tax havens because the direction of the tax treaty effect, if any, would depend on the whether the acquirer has this tax-treaty-favored structure in place before the transaction. Therefore, the direction of the tax treaty effect is ambiguous.

ArcelorMittal, the world's largest steel producing company in the world with a best-in-class global tax function, revealed in an interview that tax was not seen as a priority before the merger of Arcelor and Mittal in 2006 (Ernst & Young, 2011). In sum, it is an empirical question whether an acquirer will consider a target's subsidiary presence to be relevant in target selection when undertaking a domestic acquisition. Our alternative hypothesis is as follows:

**H1:** The tax haven subsidiaries of acquirers and targets are more strongly related than would be observed in random pairings.

#### **3. Research Design**

#### 3.1 Measuring of Tax Haven Subsidiary Relatedness

To test our hypothesis, we develop two measures of how closely related the acquirer's and target's sets of tax haven subsidiaries are: (1) the degree of diversity of tax haven subsidiary locations between the merging firms and (2) the degree of overlap of tax haven subsidiary locations, from the acquirer's perspective. These two measures of computed from firm-year level subsidiary data reported in Exhibit 21 in firms' 10-K reports.<sup>10</sup> Following Black, Dikolli, and Dyreng (2012), a jurisdiction is classified as a tax haven if it is identified as a haven by a minimum of two out of four sources listed in Miedema (2008). The list of tax haven jurisdictions is provided in Appendix B.

The tax haven subsidiary diversity measure is defined below:

Tax Haven Sub Diversity  $_{i,j,m,t-1} = \frac{No. of new tax haven subs}{No. of distinct tax haven subs} of merger pair _{i,j,m,t-1}$ 

<sup>&</sup>lt;sup>10</sup> See Dyreng and Lindsey (2009) for details. We thank Scott Dyreng for making these data available to us. While the subsidiary countries listed in Exhibit 21 are not always complete, they are the public source of multinational subsidiary locations. Thus, we assume this list is also the source of information for potential acquirers.

where the numerator is the number of tax haven jurisdictions where target j has subsidiaries and acquirer i does not have subsidiaries before the acquisition, based on the firms' disclosed material subsidiary information at year t-1. The denominator is the sum of acquirer i's and target j's number of tax haven jurisdictions, but common jurisdictions are counted only once. This tax haven subsidiary diversity measure is a proxy for the degree of new tax haven subsidiaries gained from acquiring target j by acquirer i.

The tax haven subsidiary overlap measure is defined below:

Tax Haven Sub Overlap 
$$_{i,j,m,t-1} = \frac{No. of subs in the same tax havens _{i,j,m,t-1}}{No. of tax haven subs of the acquirer _{i,j,m,t-1}}$$

where the numerator is the number of tax haven jurisdictions where both acquirer i and target j have subsidiaries before the transaction, based on the firms' disclosed material subsidiary information at year t-1. The denominator is the number of tax haven jurisdictions where the acquirer i has subsidiaries before the transaction. This tax haven subsidiary overlap proxy measures the extent of overlapping tax haven subsidiary between the potential merging firms. By construction, this measure is not defined for acquirers that do not have subsidiaries in tax havens at the time of the transaction. Such observations are code as missing in the overlap measure, but have a diversity measure equal to one.

#### 3.2 Forming the Matched Control Sample

Following Bena and Li (2013), we create a pool of potential targets and acquirers. We form the matched control sample for the targets and acquirers by matching on deal announcement year, industry, and firm size using the Compustat database. Specifically, for each target and acquirer of a deal announced in year t, we find a maximum of five matched targets and five matched acquirers by industry (based on the closest SIC grouping) and by firm size (total

assets) in year t-1 that were neither a target or an acquirer in the three-year period prior to the deal announcement. We then form the matched control acquirer-target pairs sample by pairing the actual acquirer with the matches to the target, and by pairing the actual target with the matches to the acquirer. As noted in Bena and Li (2013), this matching procedure captures M&A clustering in time (Mitchell and Mulherin, 1996; Maksimovic, Phillips, and Yang, 2013) and industry (Andrade, Mitchell, and Stafford, 2001; Harford, 2005), and allows one to compare actual merger pairs to the characteristics that would result from a random pairing.

#### 3.3 Estimating Equations

To test our hypothesis H1, we follow Bena and Li (2013) and run a conditional logit regression using cross-sectional data as of fiscal year end before the merger announcement:

$$\begin{aligned} Acquirer-Target_{i,j,m,t} &= \alpha + \beta_1 Tax \text{ Haven Subsidiary Relatedness}_{i,j,m,t-1} \\ &+ \beta_2 Foreign \text{ Subsidiary Relatedness}_{i,j,m,t-1} \\ &+ \beta_3 Acquirer \text{ Characteristics}_{i,m,t-1} + \beta_4 \text{ Target Characteristics}_{j,m,t-1} \\ &+ Common \text{ Characteristics}_{i,j,m,t-1} + Deal \text{ Fixed Effect}_m + \varepsilon_{i,j,m,t} \end{aligned}$$
(1)

The dependent variable, Acquirer- $Target_{i,j,m,t}$  is an indicator variable equal to one if the acquirer-target pair is the *actual* acquirer-target pair for deal *m*, and zero if the pair is a control acquirer-target pair for deal *m*. For each deal *m*, there is one observation for the actual acquirer and target pair as well as multiple observations for the control acquirer-target pairs. *Tax Haven Subsidiary Relatedness*<sub>i,j,m,t-1</sub> is one of the two measures of tax haven subsidiary relatedness (diversity and overlap) between the acquirer and target as defined previously. *Foreign Subsidiary Relatedness*<sub>i,j,m,t-1</sub> measures the relatedness of foreign subsidiaries between the acquirer and target, defined in a manner similar to the tax haven measure, and is included as a control variable. *Acquirer Characteristics*<sub>i,m,t-1</sub> and *Target Characteristics*<sub>i,m,t-1</sub> are firm-level control variables

including return on assets, market-to-book ratio, sales growth, cash holdings, leverage, R&D expenditures, intangibles, and capital expenditures. *Common Characteristics*<sub>*i,j,m,t-1*</sub> is a vector of three indicator variables: whether the acquirer and target are incorporated in the same state (*Same Incorporation*), whether the acquirer and target are headquartered in the same state (*Same Incorporation*), whether the deal is a within-industry transaction (*Within Industry*). *Deal Fixed Effect*  $_m$  is the fixed effect for a given actual acquirer-target pair and its control pairs. Please refer to Appendix A for variable definitions.

#### 3.4 Sample

We draw the sample from the SDC Platinum Mergers & Acquisitions database. Our full sample consists of 437 actual acquirer-target pairs from M&As announced between January 1, 1995 and December 31, 2010 that satisfy the following criteria:

- (a) The acquisition is completed.
- (b) Both acquirer and target are publicly listed U.S. firms.
- (c) The deal value disclosed in SDC is no less than \$1 million and is at least 1% of the acquirer's market capitalization measured on the 11<sup>th</sup> trading day prior to the merger announcement date.
- (d) The acquirer owns less than 50% of the shares of the target prior to the merger announcement date and owns 100% of the target after the transaction.
- (e) Both acquirer and target have disclosed material subsidiary data (Exhibit 21) as in Dyreng and Lindsey (2009)
- (f) Both acquirer and target have annual financial statement data available from Compustat.
- (g) Neither acquirer nor target belongs to the financial industries (SIC codes 6000-6999).

For the pool of potential merger participants (i.e., matched control acquirers and targets),

we require the control firms to have disclosed material subsidiary information (Exhibit 21) and

the required financial statement data to compute the control variables from Compustat. Our sample consists of 437 M&A transactions in which both the acquirer and target have at least one matched control firm. For our 437 acquirers (targets), we are able to find 1,865 (1,910) matched control acquirers (targets) that satisfy the matching requirements described in Section 3.2. We then form 3,775 matched control acquirer-target pairs. Of the 437 actual acquirer-target pairs, 240 (54.9 percent) pairs consist of acquirers and targets that both have tax haven subsidiaries at the time of the transaction. Most of our sample acquirers (363 out of 437 or 83 percent) have subsidiaries in tax havens at the time of the acquisition. This percentage is smaller for our sample targets (270 out of 437 or 62 percent). The smaller percentage is not surprising given that the acquirers are much larger firms than the targets and that larger firms are more likely to have established foreign subsidiaries. The distribution by announcement year of the actual acquirer-target pairs and their matched control pairs is presented in Table 1.

Descriptive statistics for the actual acquirers, targets, and their control counterparts are presented in Table 2. Regarding the tax haven subsidiary characteristics, our sample acquirers have a greater number of tax haven subsidiaries (*Tax Haven Subs*) and foreign subsidiaries (*Foreign Subs*) than their matched control acquirers, but they share a similar ratio of tax haven subsidiaries to foreign subsidiaries (*Tax Haven Sub Ratio*). Our sample acquirers are also larger, more profitable, exhibit higher sales growth, hold less cash, and have less R&D expenditures than their matched control counterparts. Turning to the targets, all the tax haven subsidiary characteristics are very similar between the actual target and the matched control target samples. But the two samples do differ in terms of the proportion of incorporation in Delaware, total assets, cash holding, leverage, R&D expenditures, and intangible assets.

In terms of our variables of interest, the actual acquirer-target pairs share a lower level of tax haven subsidiary diversity and a higher level of tax haven subsidiary overlap than their matched control acquirer-target pairs. For all foreign subsidiaries, the overlap measure (*Foreign Sub Overlap*) is also larger for the actual acquirer-target pairs, but the diversity measure (*Foreign Sub Diversity*) is not statistically different across the two samples. Within our sample of 437 transactions, we find that the tax havens that the sample acquirers and targets have in common are Singapore (21.5 percent), Hong Kong (16 percent), Switzerland (13.7 percent), Ireland (12.1 percent), Malaysia (7.6 percent), Bermuda (6.2 percent), Barbados (5.7 percent), Cayman Islands (4.6 percent), and Luxembourg (3 percent). Finally, 51.5 percent of actual acquirer-target pairs are incorporated in the same state (*Same Incorporation*), 27.5 percent are headquartered in the same state (*Same Headquarter*), and 39.3 percent are within industry M&As. These percentages are higher than those for their control pairs.

#### **4. Empirical Results**

#### 4.1 Univariate Analysis

Table 3 presents the correlations among the common measures between the acquirers and targets. *Tax Haven Sub Diversity (Overlap)* is negatively (positively) related to the likelihood of merger pair formation. *Same Headquarter* is also positively related to the likelihood of becoming an acquirer-target pairing. Note that the correlation between *Tax Haven Sub Diversity* and *Tax Haven Sub Overlap* is positive, but this correlation becomes insignificant (with a negative point estimate) when we restrict our sample to transactions in which both the acquirer and target have at least one tax haven subsidiary (i.e., *Tax Haven Subs* > 0).

#### 4.2 Regression Results – Hypothesis H1

Table 4 presents the estimation results of Equation (1) using *Tax Haven Sub Diversity* as the main independent variable. Column (1) tabulates results using the full sample. Column (3) tabulates results using a subsample of firms in which the target also has at least one tax haven subsidiary prior to the transactions. Although our control sample is formed by matching on firm size (total assets), we include with total assets in the model to ensure that the results are not affected by the remaining differences in firm size. Across both the specifications in Table 4, the results show a negative association between *Tax Haven Sub Diversity* and the likelihood a merger pair forms. This finding is consistent with the economies of scale hypothesis: acquirers are more likely to acquire targets with tax haven subsidiary presence similar to their own.

The estimation results of Equation (1) using *Tax Haven Sub Overlap* as the main independent variable are presented in Table 4, columns (2) and (4). Note that, by construction, the *Tax Haven Sub Overlap* measure is only defined for acquirers that have subsidiaries in tax havens at the time of the acquisitions. This data requirement reduces the test sample from 437 to 355 actual acquirer-target pairs. Across the two specifications in Table 4, the coefficients on *Tax Haven Sub Overlap* are positive and significant at the 5% level, indicating that the overlap of tax haven subsidiary location between the acquirer and target positively affects the likelihood of a merger pairing. These results mirror those using *Tax Haven Sub Diversity* as the test variable and are, again, consistent with the economies of scale hypothesis.

Taken together, the evidence indicates that the tax haven subsidiary relatedness between the acquirer and target positively contributes to the probability of a merger pairing. This evidence is consistent with acquirers not only considering the potential targets' subsidiaries locations, but also choosing targets with similar tax haven locations.

#### 4.3 Robustness Check – The Netherlands as a tax haven jurisdiction

Dyreng et al. (2013) finds that U.S. multinationals funnel equity from headquarters to their foreign operating subsidiaries through intermediate equity holding companies in certain countries, particularly the Netherlands, to avoid dividend taxes and to bypass the Controlled Foreign Corporation rule. Based on the results of Dyreng et al. (2013), we consider the Netherlands a tax haven jurisdiction in constructing our tax haven diversity and overlap measures as a sensitivity test.

In our sample, the Netherlands is a popular location where the acquirer and the target have a common subsidiary (123 out of 437 deals, or 28.1 percent). The results reported in Table 5 mirror specification reported in Table 4, except that we include the Netherlands as an additional tax haven country. In columns (1) and (3), the estimated coefficients on our *Tax Haven Sub Diversity* measure is significantly negative at the 5% level, results that are consistent with those when Netherlands is not included as a tax haven in columns (1) and (3) of Table 4. Also similar to the results in Table 4 (columns (2) and (4)), the association between *Tax Haven Sub Overlap* and the probability of a merger pairing is significantly positive. In sum, the results suggest that our main conclusions are not affected by including the Netherlands as a tax haven.

#### 4.4 Robustness Check – Are we capturing effects unrelated to tax?

A possible alternative explanation for our results is that the observed pattern is related to economic factors other than just tax haven use. For example, U.S. multinationals with subsidiary locations in another jurisdictional classifications, such as in Europe, may find targets with subsidiaries in EU countries more attractive because of the potentially higher synergies resulting from increases in market power and/or higher operating efficiency post merger. A similar argument can be made for firms with subsidiaries in OECD nations. To address this alternative explanation, we control for these non-tax economic incentives in our regressions by constructing four new of variables: *OECD Sub Diversity/Overlap* and *EU sub Diversity/Overlap* to capture the degree of subsidiary relatedness in terms of OECD and EU nations.

Descriptive results reveal that the mean value of *OECD Sub Diversity* (*EU Sub Diversity*) for actual acquirer-target pairs is 0.137 (0.143) and that for the control sample is 0.184 (0.181). Statistical tests suggest that, at the 5% level of statistical significance, the actual acquirer-target pairs and the control sample are significantly different in *OECD Sub Diversity* and *EU Sub Diversity*. The mean (median) values of *OECD Sub Overlap* and *EU Sub Overlap* are 0.341 (0.285) and 0.319 (0.238), respectively. The actual deals and their matched control counterparts share a similar level of overlap in these dimensions.

We include one of these four new control variables into our baseline regressions and the results are presented in Table 6. Columns (1) and (2) of Table 6 show that our variable of interest, *Tax Haven Sub Diversity*, remains significantly negative in both regressions, while the coefficients on *OECD Sub Diversity* and *EU Sub Diversity* are both positive but only *EU Sub Diversity* is significant. Columns (3) and (4) show that neither *OECD Sub Overlap* nor *EU Sub Overlap* are a significant determinant of the likelihood of a merger pair formation, but the coefficients on *Tax Haven Sub Overlap* remain significant at the 5% level. To provide further evidence that our results are not driven by non-tax economic incentives such as preferences in OECD or EU countries, we restrict our analyses to subsamples of transactions in which both the acquirer and target have at least one OECD or EU subsidiary. Columns (5) and (6) show that, in the subsample of firms with at least one OECD subsidiary, the coefficients on *Tax Haven Sub Diversity/Overlap* are not. Similarly, in the subsample of firms with at least one EU subsidiary, the coefficients on *Tax* 

*Haven Sub Diversity/Overlap* remain significant after controlling for *EU Sub Diversity/Overlap* (Columns (7) and (8)). Overall, the acquirer-target's tax haven relatedness is a significant predictor of the likelihood of merger pair formation, and non-tax economic factors such as subsidiary relatedness in OECD and EU countries do not alter our results.

#### 4.5 Additional Test – Are firms with more tax haven subs more likely to participate in M&A?

So far we have documented a significant negative (positive) relationship between the degree of the acquirer-target's tax haven diversity (overlap) and the probability of a merger pair formation. To complement our understanding of the observed results, we further investigate the underlying selection process. Specifically, we explore whether the number of tax haven subsidiaries of a firm is related to the likelihood of the firm becoming an acquirer or a target in the domestic M&A market. Because larger firms tend to have more foreign subsidiaries, it is expected that firms that have more foreign subsidiaries are more likely to be acquirers. However, it is less clear whether and how a firm's number of tax haven subsidiaries is related to the likelihood of being an acquirer or a target. We examine firms' likelihood of becoming acquirers and targets using the following conditional logit model (Bena and Li, 2013):

$$Target_{j,m,t} = \alpha + \beta_1 Ln(Tax Haven Subs_{j,m,t-1}) + \beta_2 Ln(Non-Haven Subs_{j,m,t-1})$$

$$+ \beta_3 Target Tax Haven Subs Ratio_{j,m,t-1}$$

$$+ \beta_4 Target Characteristics_{j,m,t-1} + Deal Fixed Effect_m + \varepsilon_{j,m,t}$$

$$(2)$$

Acquirer 
$$_{i,m,t} = \alpha + \beta_1 Ln(Tax Haven Subs_{i,m,t-1}) + \beta_2 Ln(Non-Haven Subs_{i,m,t-1})$$
  
+  $\beta_3 Acquirer Tax Haven Subs Ratio_{i,m,t-1}$   
+  $\beta_4 Acquirer Characteristics_{i,m,t-1} + Deal Fixed Effect_m + \varepsilon_{i,m,t}$  (3)

In Equation (2), the dependent variable,  $Target_{j,m,t}$ , is an indicator variable that equals one if target *j* is the *actual* target for deal *m*, and zero otherwise (i.e., a control target for deal *m*).

For each deal *m*, there is one observation for the actual target and multiple observations (a maximum of five) for the control targets.  $Ln(Tax Haven Subs_{j,m,t-1})$  is the natural logarithms of target *j*'s number of disclosed material subsidiaries located in tax havens. Included as a control variable,  $Ln(Non-Haven Subs_{j,m,t-1})$  is the natural logarithms of target *j*'s number of disclosed material subsidiaries located in tax havens. Included as a control variable,  $Ln(Non-Haven Subs_{j,m,t-1})$  is the natural logarithms of target *j*'s number of disclosed material subsidiaries located in non-haven foreign countries. *Target Tax Haven Subs Ratio<sub>j,m,t-1</sub>* is the number of tax haven subsidiaries divided by the number of foreign subsidiaries of target *j*. *Target Characteristics*<sub>*i,m,t-1*</sub> are firm-level control variables that may affect the likelihood of merger participation including return on assets, market-to-book ratio, sales growth, cash holdings, leverage, R&D expenditures, intangibles, and capital expenditures. We also include a dummy variable to indicate whether the firm in incorporated in the state of Delaware. *Deal Fixed Effect*<sub>m</sub> is the fixed effect for each target and its control targets.

As in Equation (2), in Equation (3), for each deal, there is one observation for the actual acquirer and multiple observations (maximum of five) for the control acquirers. The dependent variable,  $Acquirer_{i,m,t}$ , is an indicator variable that equals one if acquirer *i* is the actual acquirer for deal *m*, and zero otherwise (i.e., a control acquirer for deal *m*). Other variables are similarly defined. Please refer to Appendix A for variable definitions.

Estimation results of Equations (2) and (3) are presented in Table 7 and 8, respectively. Column (1) of Table 7 shows that the coefficient on *Ln(Tax Haven Subs)* is not significantly different from zero, suggesting that the number of tax haven subsidiaries of a firm is not reliably related to whether the firm becomes a target. Similar results are obtained when we include the Netherlands as a tax haven, column (2), or include the number of subsidiaries in an OECD or EU nation as a control variable, columns (3) and (4).

For Equation (3), column (1) of Table 8 shows that the coefficient estimate for Ln(Tax)Haven Subs) is positive and significant, indicating that firms with more subsidiaries located in tax havens are more likely to become acquirers. This result is robust to alternative specifications that classify the Netherlands as a tax haven, column (2), or that control for the number of OECD or EU subsidiaries, columns (3) and (4). Interestingly, the results also suggest that the number of non-haven subsidiaries is not reliably related to the probability of being an acquirer (columns 1 and 2). Also note that the coefficient on the variable Tax Haven Sub Ratio is significantly negative. Untabulated results suggest that the negative coefficient on Tax Haven Sub Ratio is due to the denominator effect: a strong positive correlation between the number of foreign subsidiaries and the likelihood of being a true acquirer. Although it is not surprised to find that firms with more foreign subsidiaries are more likely to be acquirers because of the size effect, findings on Ln(Tax Haven Subs) and Ln(Non-Haven Subs) suggest that not all foreign subsidiaries are treated equally and that subsidiaries in tax havens are more relevant in predicting which firms are more likely to be acquirers. Taken together, the results of Equations (2) and (3) imply that the association between the degree of acquirer-target's tax haven overlap and the probability of merger pair formation is likely from tax planning of the acquirer rather than from the target's tax planning. That is, firms with more tax haven subsidiaries tend to be more actively participate in the M&A market as acquirers and pick targets whose subsidiaries are located in tax havens similar to their own.

#### **5.** Conclusions

In this paper, we examine the real effects of international tax planning on domestic mergers and acquisitions. Specially, this paper uses the cross-sectional differences in acquirers' and targets' tax haven subsidiary profiles as a source of variation in international tax planning activity to examine whether and how the U.S. acquirers' past tax planning is related to their target selection decisions.

We identify firms' material subsidiaries located in tax havens using their disclosed material subsidiary data in Exhibit 21 of their 10-K reports and develop two measures of tax haven subsidiary relatedness between the acquirer and its target: the tax haven diversity and overlap measures. Results from our regression analyses indicate that the probability of a merger pair formation is significantly negatively (positively) associated with our tax haven diversity (overlap) measure, suggesting that acquirers are more likely to acquire targets whose subsidiaries are located in tax havens similar to their own. This finding is consistent with the economies of scale in tax planning.

This study offers fresh insights by documenting evidence regarding the role of U.S. firms' tax haven subsidiaries' locations in domestic mergers and acquisitions. The results of this study contribute to a more comprehensive understanding of the real effects of firms' past tax planning on corporate behavior.

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Variables	Definition and Construction
Tax Haven	Following Black et al. (2012), a jurisdiction is classified as a tax haven if it was identified as a haven by a minimum of two out of four sources listed in Miedema (2008). The list of tax haven jurisdictions is provided in Appendix B.
Tax Haven Sub Diversity	The number of tax haven jurisdictions where the target has subsidiary presence but the acquirer does not, scaled by the sum of the acquirer's and target's number of tax haven jurisdictions, but common jurisdictions are counted only once.
Non-Haven Sub Diversity	The number of non-tax haven jurisdictions where the target has subsidiary presence but the acquirer does not, scaled by the sum of the acquirer's and target's number of non-tax haven jurisdictions, but common jurisdictions are counted only once.
Foreign Sub Diversity	The number of foreign jurisdictions where the target has subsidiary presence but the acquirer does not, scaled by the sum of the acquirer's and target's number of foreign jurisdictions, but common jurisdictions are counted only once.
Tax Haven Sub Overlap	The number of tax haven jurisdictions where both the acquirer and target have subsidiary presence, scaled by the number of tax haven jurisdictions where the acquirer has subsidiary presence.
Non-Haven Sub Overlap	The number of non-tax haven jurisdictions where both the acquirer and target have subsidiary presence, scaled by the number of non-tax haven jurisdictions where the acquirer has subsidiary presence.
Foreign Sub Overlap	The number of foreign jurisdictions where both the acquirer and target have subsidiary presence, scaled by the number of foreign jurisdictions where the acquirer has subsidiary presence.
Ln(Tax Haven Subs)	The natural logarithm of the number of foreign subsidiaries located in a tax haven.
Ln(Non-Haven Subs)	The natural logarithm of the number of foreign subsidiaries located in a non-tax haven.
Ln(Foreign Subs)	The natural logarithm of the number of foreign subsidiaries.
Tax Haven Sub Ratio	The number of subsidiaries located in a tax haven divided by the number of subsidiaries located in a foreign country.

### Appendix A

Delaware	Indicator variable that equals one if the firm is incorporated in Delaware.
Same Incorporation	Indicator variable that equals one if the acquirer and target are incorporated in the same state.
Same Headquarter	Indicator variable that equals one if the acquirer's and target's headquarters are located in the same state.
Within Industry	Indicator variable that equals one if the acquirer and target share a 2-digit SIC industry, and 0 otherwise.
Total Assets	The natural logarithm of total assets in millions.
Return on Assets	Pre-tax income scaled by total assets.
Market-to-Book	The market value of common equity scaled by the book value of common equity.
Sales Growth	The growth rate of sales.
Cash	Cash and short-term investment scaled by total assets.
Leverage	Total debt scaled by total assets.
R&D	Research & development expenses scaled by total assets
Intangible Assets	Intangible assets scaled by total assets
PP&E	Property, plant, and equipment expenditures scaled by total assets

#### Appendix B

A jurisdiction is classified as a tax haven if it was identified as a haven by a minimum of two out of four sources listed in Miedema (2008). The four sources are (1) the Organisation for Economic Co-Operation and Development (OECD), (2) the U.S. Stop Tax Haven Abuse Act, (3), the International Monetary Fund (IMF), and (4) Tax Research Organization.

#### **Tax Haven Jurisdictions**

Andorra	Gibraltar	Mauritius
Anguilla	Grenada	Monaco
Antigua and Barbuda	Guernsey	Netherlands Antilles
Aruba	Hong Kong	Panama
Bahamas	Ireland	Saint Kitts and Nevis
Bahrain	Isle of Man	Saint Lucia
Barbados	Jersey	Saint Vincent and the Grenadines
Belize	Lebanon	Samoa
Bermuda	Liberia	San Marino
British Virgin Islands	Liechtenstein	Seychelles
Cayman Islands	Luxembourg	Singapore
Cook Islands	Macau	Switzerland
Costa Rica	Malaysia	Turks and Caicos Islands
Cyprus	Malta	Vanuatu
Dominica	Marshall Islands	
Dominica	Warshan Islands	

 Table 1

 Sample Distribution by Merger Announcement Year

The full sample consists of 437 actual acquirer-target pairs and 3,775 matched control pairs. The Acquirer-Target Pairs with Tax Haven Sub sample consists of 240 transactions in which both the acquirer and target have at least one disclosed material subsidiary located in a tax haven jurisdiction. The Acquirer (Target) with Tax Haven Sub sample consists of 363 acquirers (270 targets) that have at least one disclosed material subsidiary located in a tax haven jurisdiction.

Year	Actual Acquirer-Target Pairs	Control Acquirer-Target Pairs	Actual Acquirer-Target Pairs with Tax Haven Sub	Acquirers with Tax Haven Sub	Targets with Tax Haven Sub
	_			_	_
1995	5	37	1	3	3
	(1.14)	(0.98)	(0.42)	(0.83)	(1.08)
1996	8	68	3	6	3
	(1.83)	(1.8)	(1.25)	(1.65)	(1.08)
1997	22	192	9	16	11
	(5.03)	(5.09)	(3.75)	(4.41)	(4.33)
1998	35	264	23	28	25
	(8.01)	(6.99)	(9.58)	(7.71)	(9.39)
1999	51	427	29	48	32
	(11.67)	(11.31)	(12.08)	(13.22)	(11.55)
2000	47	387	26	40	27
	(10.76)	(10.25)	(10.83)	(11.02)	(9.75)
2001	30	261	16	26	16
	(6.86)	(6.91)	(6.67)	(7.16)	(6.14)
2002	11	102	8	10	8
	(2.52)	(2.70)	(3.33)	(2.75)	(2.89)
2003	19	172	11	14	12
	(4.35)	(4.56)	(4.58)	(3.86)	(4.69)
2004	25	213	10	18	12
	(5.72)	(5.64)	(4.17)	(4.96)	(4.33)
2005	38	340	24	33	27
	(8.70)	(9.01)	(10.00)	(9.09)	(9.75)
2006	28	239	14	20	18
	(6.41)	(6.33)	(5.83)	(5.51)	(6.50)
2007	40	350	21	35	25
	(9.15)	(9.27)	(8.75)	(9.64)	(10.11)
2008	24	226	14	20	16
	(5.49)	(5.99)	(5.83)	(5.51)	(5.78)
2009	28	263	18	25	19
	(6.41)	(6.97)	(7.50)	(6.89)	(6.86)
2010	26	234	13	21	16
	(5.95)	(6.20)	(5.42)	(5.79)	(5.78)
Total	437	3,775	240	363	270

## Table 2Descriptive Statistics

The full sample consists of 437 actual acquirer-target pairs and 3,775 matched control pairs. For the 437 acquirers (targets), there are 1,865 (1,910) matched control acquirers (targets) that satisfy the matching requirements described in Section 3.2. The 3,775 matched control acquirer-target pairs sample is formed by pairing the actual acquirer with the matched control target(s), and by pairing the actual target with the matched control acquirer(s). The right-most column shows the *p*-value for t-test (Chi-Square test) for mean (frequency) differences between the actual sample and matched control sample. All variables are computed as described in Appendix.

	<b>Actual Firms</b>			Matc			
	Mean	Std Dev	Median	Mean	Std Dev	Median	P-value
Acauirer-Target Pairs		N=437			N=3.775		
Tax Haven Sub Diversity (%)	18.04	29.15	0.00	26.82	35.74	0.00	< 0.01
Non-Haven Sub Diversity (%)	19.27	25.75	6.25	27.26	31.01	13 33	< 0.01
Foreign Sub Diversity (%)	19.27	23.96	8 33	27.75	29.52	15 38	< 0.01
Tax Haven Sub Overlap (%)	22.05	30.22	0.00	17.39	26.52	0.00	< 0.01
Non-Haven Sub Overlap (%)	31.51	30.08	22.22	30.45	31.64	20.00	10101
Foreign Sub Overlap (%)	30.27	29.28	23.53	28.34	29.64	18.18	
Same Incorporation (%)	51.49	50.03	100	44.15	49.68	0.00	< 0.05
Same Headquarter (%)	27.46	44.68	0.00	16.45	37.08	0.00	< 0.01
Within Industry (%)	39.34	48.90	0.00	36.95	48.28	0.00	(0101
Acauirers		N=437			N=1,865		
Tax Haven Subs	4.37	3.97	4.00	2.35	2.64	1.00	< 0.01
Non-Haven Subs	17.92	17.45	12.00	9.13	9.66	6.00	< 0.01
Foreign Subs	22.30	21.02	16.00	11.49	11.89	7.00	< 0.01
Tax Haven Sub Ratio (%)	21.52	17.95	19.05	21.07	22.01	18.18	
Delaware (%)	67.73	46.80	100.00	63.86	48.05	100.00	
Total Assets	8.20	1.80	8.14	6.78	1.83	6.78	< 0.01
Return on Assets (%)	7.77	47.77	9.74	2.65	41.29	7.01	< 0.05
Market-to-Book	4.45	9.18	2.96	3.21	9.58	2.32	
Sales Growth (%)	17.80	45.92	8.03	13.23	56.67	0.00	
Cash (%)	11.93	12.03	8.17	14.17	14.26	9.66	< 0.01
Leverage (%)	21.33	25.86	15.44	21.28	44.62	12.97	
R&D(%)	5.38	6.55	3.42	6.34	10.54	3.56	< 0.10
<i>PP&amp;E</i> (%)	26.04	25.69	17.94	25.17	26.42	17.33	
Targets		N=437			N=1,910		
Tax Haven Subs	1.72	2.34	1.00	1.50	1.97	1.00	< 0.05
Non-Haven Subs	7.03	8.34	4.00	6.20	7.36	3.00	< 0.05
Foreign Subs	8.75	10.40	5.00	7.72	9.00	4.00	< 0.05
Tax Haven Sub Ratio (%)	18.18	22.53	16.67	19.42	24.13	14.31	
Delaware (%)	69.79	45.97	100.00	62.04	48.54	100.00	< 0.01
Total Assets	6.17	1.75	6.12	5.77	1.84	5.76	< 0.10
Return on Assets (%)	2.94	18.18	6.26	0.72	23.89	4.37	< 0.10
Market-to-Book	3.27	3.86	2.22	3.31	4.14	2.14	
Sales Growth (%)	17.09	42.16	7.76	13.24	48.22	0.00	
<i>Cash</i> (%)	15.19	15.57	10.50	16.47	15.94	12.13	
Leverage (%)	19.83	25.23	9.59	15.30	22.26	4.25	< 0.01
<i>R&amp;D</i> (%)	7.27	9.00	3.82	8.52	10.37	5.15	< 0.05
<i>PP&amp;E</i> (%)	23.35	22.87	16.08	22.78	22.77	15.53	

## Table 3Correlation Matrix

Pearson (pair-wise) correlation coefficients are presented below (above) the diagonal. Coefficients in bold are all statistically significant at less than the 10% level in two-tail tests.

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1)	Acquirer-Target		0.04	0.09	0.01	-0.07	-0.09	-0.09	0.04	0.01	0.02
(2)	Same Incorporation	0.03		0.18	0.11	0.02	0.05	0.04	0.08	0.07	0.08
(3)	Same Headquarter	0.08	0.19		0.12	-0.01	-0.01	-0.03	0.10	0.08	0.08
(4)	Within Industry	0.01	0.12	0.12		-0.02	-0.03	-0.03	0.07	0.03	0.04
(5)	Tax Haven Sub Diversity	-0.05	-0.01	0.02	0.03		0.50	0.68	0.28	0.21	0.25
(6)	Non-Haven Sub Diversity	-0.06	0.05	0.03	-0.01	0.55		0.95	0.40	0.43	0.47
(7)	Foreign Sub Diversity	-0.07	0.04	0.03	0.00	0.71	0.97		0.44	0.41	0.46
(8)	Tax Haven Sub Overlap	0.04	0.08	0.10	0.07	0.26	0.32	0.34		0.47	0.72
(9)	Non-Haven Sub Overlap	0.01	0.05	0.07	0.04	0.15	0.36	0.29	0.47		0.96
(10)	Foreign Sub Overlap	0.02	0.07	0.08	0.06	0.20	0.37	0.33	0.71	0.93	

# Table 4The Association between Tax Haven Sub Relatedness and<br/>the Probability of being an Acquirer-Target Pair

This table reports conditional logit regression results of the probability of being an acquirer-target pair on the two firms' tax haven subsidiary relatedness. The dependent variable is an indicator variable that equals one if the acquirer-target pair is an actual pair, and zero otherwise. All variables are computed as described in Appendix. Reported in parentheses are t-statistics computed using robust standard errors adjusted for deal clustering; \*\*\*, \*\*, \* represent statistical significance (one-tailed for *Tax Haven Sub Diversity* and *Tax Haven Sub Overlap*; two-tailed control variables) at 1%, 5% and 10%, respectively.

	All Acquirer-Tai	rget Pairs	Acquirers & Tax Ha	Targets with ven Sub
	(1)	(2)	(3)	(4)
Tax Haven Sub Diversity	-0.607*** (-2.913)		-1.235*** (-2.726)	
Non-Haven Sub Diversity	-0.586** (-2.455)		-0.152 (-0.389)	
Tax Haven Sub Overlap		0.494** (2.058)		0.554** (1.918)
Non-Haven Sub Overlap		0.152 (0.562)		0.097 (0.280)
Common Characteristics				
Same Incorporation	0.330***	0.262**	0.314*	0.286*
	(2.868)	(2.011)	(1.857)	(1.691)
Same Headquarter	0.712***	0.597***	0.667***	0.725***
	(4.915)	(3.760)	(3.133)	(3.551)
Within Industry	1.444***	1.238**	1.197*	0.821
	(3.397)	(2.396)	(1.813)	(1.226)
Acquirer Characteristics				
Total Assets	1.125***	1.385***	1.426***	1.492***
	(9.568)	(8.573)	(6.686)	(7.133)
Return on Assets	0.077	0.24	0.515	0.314
	(0.527)	(1.630)	(1.069)	(0.667)
Market-to-Book	-0.000***	0.018**	0.005	0.009
	(-2.606)	(2.019)	(0.495)	(1.070)
Sales Growth	0.117	0.100	0.523*	0.368
	(1.361)	(0.784)	(1.916)	(1.546)
Cash	-0.110	-0.041	0.917	1.037
	(-0.232)	(-0.066)	(1.160)	(1.338)
Leverage	0.022	-0.008	0.122	0.200
	(0.206)	(-0.027)	(0.295)	(0.468)
R&D	0.246	0.887	-1.984	-1.673
	(0.263)	(0.760)	(-1.275)	(-1.116)
Intangible Assets	-0.030	-0.023	0.004	-0.064
	(-0.745)	(-0.285)	(0.031)	(-0.455)
PP&E	0.393*	0.110	-0.839	-0.772
	(1.766)	(0.324)	(-1.401)	(-1.398)

#### Target Characteristics

Total Assets	0.464***	0.389***	0.479***	0.399***
	(7.452)	(5.638)	(4.556)	(3.729)
Return on Assets	0.304**	0.476**	0.255	0.392
	(2.013)	(2.466)	(0.714)	(1.03)
Market-to-Book	-0.000*	0.005**	0.006*	0.005*
	(-1.923)	(2.300)	(1.661)	(1.915)
Sales Growth	-0.025	-0.006*	0.021	0.036
	(-0.392)	(-1.859)	(0.207)	(0.345)
Cash	0.401	0.784*	1.167**	1.347**
	(1.087)	(1.889)	(1.969)	(2.178)
Leverage	0.392**	0.504**	0.603*	0.672**
	(2.060)	(2.351)	(1.853)	(2.061)
R&D	0.233	0.508	-0.469	-0.712
	(0.393)	(0.754)	(-0.346)	(-0.522)
Intangible Assets	0.751***	0.892***	1.211***	1.211***
	(4.290)	(4.440)	(2.862)	(2.807)
PP&E	0.220	0.368	0.481	0.429
	(0.707)	(0.924)	(0.852)	(0.749)
Deal Fixed Effects	YES	YES	YES	YES
No. of Observations	4,212	3,014	1,710	1,651
No. of Control Deals	3,775	2,659	1,470	1,415
No. of Actual Deals	437	355	240	236
Pseudo $R^2$	0.166	0.155	0.217	0.209

Table 5The Association between Tax Haven Sub Relatedness andthe Probability of being an Acquirer-Target Pair including the Netherlands as a Tax Haven

This table reports conditional logit regression results of the probability of being an acquirer-target pair on the two firms' tax haven subsidiary relatedness. The dependent variable is an indicator variable that equals one if the acquirer-target pair is an actual pair, and zero otherwise. All variables are computed as described in Appendix. Reported in parentheses are t-statistics computed using robust standard errors adjusted for deal clustering; \*\*\*, \*\*, \* represent statistical significance (one-tailed for *Tax Haven Sub Diversity* and *Tax Haven Sub Overlap*; two-tailed for control variables) at 1%, 5% and 10%, respectively.

	All Acquirer-Ta	rget Pairs	Acquirers & Targets with Tax Haven Sub		
	(1)	(2)	(3)	(4)	
Tax Haven Sub Diversity	-0.473** (-2.182)		-1.055** (-1.981)		
Non-Haven Sub Diversity	-0.621** (-2.526)		-0.216 (-0.507)		
Tax Haven Sub Overlap		0.456** (1.923)		0.575** (1.985)	
Non-Haven Sub Overlap		0.132 (0.490)		0.065 (0.193)	
Common Characteristics					
Same Incorporation	0.330***	0.262**	0.314*	0.284*	
Same Headquarter	0.717*** (4.963)	0.600***	0.676*** (3.186)	0.714*** (3.454)	
Within Industry	1.436*** (3.385)	1.253** (2.430)	1.187* (1.787)	1.202* (1.789)	
Acquirer Characteristics					
Total Assets	1.123***	1.384***	1.427***	1.492***	
Return on Assets	0.085	(8.554) 0.244* (1.669)	0.527	0.335	
Market-to-Book	-0.000***	0.018**	0.005	(0.712) 0.009 (1.053)	
Sales Growth	0.116	0.103	0.518*	(1.035) 0.372 (1.575)	
Cash	-0.097 (-0.204)	-0.036	0.840	1.041 (1.337)	
Leverage	0.024 (0.226)	-0.005	0.151 (0.370)	0.216 (0.514)	
R&D	(0.220) (0.222) (0.236)	0.989	-1.882	-1.532	
Intangible Assets	-0.031	-0.022	0.005	-0.060	
PP&E	0.380*	0.107 (0.316)	-0.837 (-1.423)	-0.786	

#### Target Characteristics

Total Assets	0.458***	0.393***	0.475***	0.402***
	(7.418)	(5.689)	(4.531)	(3.769)
Return on Assets	0.299**	0.477**	0.283	0.397
	(2.003)	(2.468)	(0.786)	(1.032)
Market-to-Book	-0.000**	0.005**	0.006*	0.005*
	(-1.963)	(2.297)	(1.684)	(1.942)
Sales Growth	-0.025	-0.006*	0.019	0.038
	(-0.384)	(-1.874)	(0.180)	(0.363)
Cash	0.394	0.777*	1.181**	1.357**
	(1.073)	(1.869)	(1.985)	(2.182)
Leverage	0.380**	0.506**	0.603*	0.669**
	(1.991)	(2.358)	(1.862)	(2.060)
R&D	0.236	0.513	-0.472	-0.708
	(0.399)	(0.762)	(-0.349)	(-0.520)
Intangible Assets	0.756***	0.894***	1.224***	1.217***
	(4.307)	(4.445)	(2.896)	(2.813)
PP&E	0.236	0.374	0.437	0.434
	(0.754)	(0.938)	(0.772)	(0.755)
Deal Fixed Effects	YES	YES	YES	YES
No. of Observations	4,212	3,014	1,710	1,651
No. of Control Deals	3,775	2,659	1,470	1,415
No. of Actual Deals	437	355	240	236
Pseudo $R^2$	0.164	0.154	0.215	0.209

Table 6The Association between Tax Haven Sub Relatedness and the Probability of being an Acquirer-Target Pair

This table reports conditional logit regression results of the probability of being an acquirer-target pair on the two firms' tax haven subsidiary relatedness. The dependent variable is an indicator variable that equals one if the acquirer-target pair is an actual pair, and zero otherwise. All variables are computed as described in Appendix. Reported in parentheses are t-statistics computed using robust standard errors adjusted for deal clustering; \*\*\*, \*\*, \* represent statistical significance (one-tailed for *Tax Haven Sub Diversity* and *Tax Haven Sub Overlap*; two-tailed for control variables) at 1%, 5% and 10%, respectively.

		All Acquirer-To	arget Pairs		Acquirers & Targets with OECD Sub		Acquirers & Targets with EU Sub	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Tax Haven Sub Diversity	-0.623***	-0.681***			-0.572**		-0.542**	
	(-2.979)	(-3.196)			(-2.353)		(-1.742)	
Non-Haven Sub Diversity	-0.872*	-1.125***			-0.443		-1.450**	
	(-1.935)	(-3.237)			(-0.672)		(-2.531)	
OECD Sub Diversity	0.316				-0.287			
	(0.739)				(-0.412)			
EU Sub Diversity		0.639**					0.867	
		(2.290)					(1.554)	
Tax Haven Sub Overlap			0.486**	0.435**		0.501**		0.531**
			(1.987)	(1.815)		(1.902)		(1.798)
Non-Haven Sub Overlap			0.082	-0.148		0.232		0.474
			(0.163)	(-0.401)		(0.391)		(0.889)
OECD Sub Overlap			0.079			0.060		
			(0.160)			(0.109)		
EU Sub Overlap				0.407				-0.188
				(1.280)				(-0.426)
Common Characteristics								
Same Incorporation	0.261**	0.255*	0.332***	0.334***	0.281**	0.327**	0.246	0.274*
	(2.004)	(1.947)	(2.878)	(2.880)	(2.004)	(2.538)	(1.577)	(1.876)
Same Headquarter	0.597***	0.602***	0.707***	0.702***	0.604***	0.738***	0.628***	0.760***
	(3.768)	(3.795)	(4.885)	(4.854)	(3.601)	(4.800)	(3.358)	(4.300)
Within Industry	1.240**	1.269**	1.448***	1.466***	1.530***	2.015***	1.064*	1.409***
	(2.404)	(2.488)	(3.421)	(3.385)	(2.978)	(4.741)	(1.809)	(2.855)

#### Acquirer Characteristics

Total Assets	1.385***	1.387***	1.124***	1.137***	1.495***	1.292***	1.611***	1.432***
	(8.558)	(8.621)	(9.497)	(9.592)	(8.198)	(8.999)	(6.998)	(8.442)
Return on Assets	0.239	0.243*	0.074	0.080	0.208	0.018	0.241	-0.065
	(1.620)	(1.652)	(0.506)	(0.544)	(1.199)	(0.130)	(1.241)	(-0.418)
Market-to-Book	0.018**	0.018**	-0.000***	-0.000***	0.015**	-0.000**	0.014*	0.010*
	(2.024)	(2.054)	(-2.632)	(-2.665)	(1.975)	(-2.426)	(1.829)	(1.717)
Sales Growth	0.101	0.109	0.116	0.113	-0.052	-0.042	0.212	0.301**
	(0.790)	(0.845)	(1.346)	(1.317)	(-0.399)	(-0.423)	(1.120)	(2.232)
Cash	-0.040	-0.087	-0.100	-0.014	0.381	0.013	0.517	0.382
	(-0.065)	(-0.139)	(-0.211)	(-0.029)	(0.573)	(0.025)	(0.655)	(0.597)
Leverage	-0.015	-0.032	0.019	0.030	-0.022	0.054	0.235	0.074
	(-0.047)	(-0.105)	(0.176)	(0.263)	(-0.050)	(0.422)	(0.523)	(0.222)
R&D	0.872	0.841	0.237	0.300	1.077	0.421	1.038	1.136
	(0.738)	(0.729)	(0.252)	(0.318)	(0.859)	(0.440)	(0.774)	(1.196)
Intangible Assets	-0.023	-0.026	-0.030	-0.030	-0.101	-0.133	-0.096	-0.076
	(-0.280)	(-0.303)	(-0.768)	(-0.772)	(-0.866)	(-1.214)	(-0.762)	(-0.820)
PP&E	0.114	0.131	0.378*	0.423*	-0.013	0.430	-1.070	-0.566
	(0.337)	(0.382)	(1.673)	(1.876)	(-0.025)	(1.149)	(-1.588)	(-1.051)
Target Characteristics								
Total Assets	0.388***	0.387***	0.465***	0.459***	0.390***	0.479***	0.357***	0.495***
	(5.598)	(5.556)	(7.448)	(7.326)	(5.258)	(7.106)	(4.322)	(6.114)
Return on Assets	0.476**	0.475**	0.310**	0.312**	0.357*	0.221	0.169	0.108
	(2.463)	(2.461)	(2.032)	(2.011)	(1.925)	(1.528)	(1.432)	(0.897)
Market-to-Book	0.005**	0.005**	-0.000*	-0.000	0.005**	-0.000*	0.005**	0.004*
	(2.304)	(2.375)	(-1.740)	(-1.628)	(2.364)	(-1.917)	(2.433)	(1.650)
Sales Growth	-0.006*	-0.006*	-0.024	-0.029	-0.007*	-0.010	0.053	0.018
	(-1.863)	(-1.892)	(-0.380)	(-0.439)	(-1.735)	(-0.773)	(0.573)	(0.195)
Cash	0.785*	0.792*	0.406	0.406	0.912**	0.474	0.405	-0.070
	(1.888)	(1.894)	(1.098)	(1.095)	(1.978)	(1.159)	(0.739)	(-0.139)
Leverage	0.504**	0.503**	0.397**	0.396**	0.414*	0.384*	0.616**	0.481**
-	(2.353)	(2.352)	(2.092)	(2.097)	(1.747)	(1.845)	(2.419)	(2.026)
R&D	0.503	0.484	0.212	0.169	0.336	0.253	-0.273	-0.142
	(0.744)	(0.713)	(0.357)	(0.286)	(0.491)	(0.401)	(-0.313)	(-0.168)

Intangible Assets	0.892***	0.886***	0.754***	0.757***	1.078***	0.856***	0.734**	0.609**
	(4.438)	(4.372)	(4.317)	(4.356)	(3.722)	(3.452)	(2.441)	(2.197)
PP&E	0.369	0.374	0.231	0.248	0.409	0.224	0.024	-0.190
	(0.926)	(0.936)	(0.745)	(0.802)	(0.938)	(0.582)	(0.046)	(-0.399)
Deal Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES
No. of Observations	4,212	4,212	3,014	3,014	3,503	2,641	2,561	2,098
No. of Control Deals	3,775	3,775	2,659	2,659	3,116	2,317	2,254	1,824
No. of Actual Deals	437	437	355	355	387	324	307	274
Pseudo $R^2$	0.166	0.168	0.155	0.156	0.186	0.169	0.194	0.181

This table reports conditional logit regression results of the probability of being a target on the firm's tax haven subsidiary profile. The dependent variable is an indicator variable that equals one if the firm is an actual target, and zero if the firm is a matched control target. All variables are computed as described in Appendix. Reported in parentheses are t-statistics computed using robust standard errors adjusted for deal clustering; ***, **, * represent statistical significance (two-tailed) at 1%, 5% and 10%, respectively.							
	(1)	(2)	(3)	(4)			
Ln(Tax Haven Subs)	0.167 (0.711)	0.197 (0.780)	0.070 (0.382)	0.042 (0.244)			
Ln(Non-Haven Subs)	-0.087 (-0.547)	-0.118 (-0.670)					
Ln(OECD Subs)			-0.004 (-0.039)				
Ln(EU Subs)				0.021 (0.189)			
Tax Haven Sub Ratio	-0.699	-0.722	-0.494	-0.449			
	(-1.271)	(-1.276)	(-1.181)	(-1.151)			
Delaware	0.334***	0.335***	0.332***	0.331***			
	(2.662)	(2.676)	(2.641)	(2.633)			
Total Assets	0.368***	0.369***	0.363***	0.361***			
	(5.164)	(5.176)	(5.074)	(5.047)			
Return on Assets	0.251	0.252	0.252	0.253			
	(1.482)	(1.488)	(1.486)	(1.488)			
Market-to-Book	-0.000*	-0.000*	-0.000*	-0.000*			
	(-1.884)	(-1.861)	(-1.912)	(-1.909)			
Sales Growth	-0.058	-0.061	-0.055	-0.055			
	(-0.752)	(-0.785)	(-0.718)	(-0.711)			
Cash	0.548	0.557	0.546	0.545			
	(1.274)	(1.289)	(1.269)	(1.268)			
Leverage	0.438**	0.439**	0.442**	0.443**			
	(2.077)	(2.075)	(2.104)	(2.114)			
R&D	-0.323	-0.306	-0.342	-0.356			
	(-0.494)	(-0.469)	(-0.522)	(-0.541)			
Intangible Assets	0.815***	0.816***	0.823***	0.823***			
	(3.818)	(3.807)	(3.827)	(3.821)			
PP&E	0.402	0.407	0.407	0.410			
	(1.083)	(1.082)	(1.101)	(1.106)			
Deal Fixed Effects	YES	YES	YES	YES			
No. of Observations	2,346	2,346	2,346	2,346			
No. of Control Firms	1,910	1,910	1,910	1,910			
No. of Actual Targets	437	437	437	437			
Pseudo $R^2$	0.057	0.057	0.057	0.057			

Table 7The Association between a Firm's Subsidiary Profile and the Probability of being a Target

This table reports conditional logit regression results of the probability of being an acquirer on the firm's tax haven subsidiary profile. The dependent variable is an indicator variable that equals one if the firm is an actual acquirer, and zero if the firm is a matched control acquirer. All variables are computed as described in Appendix. Reported in parentheses are t-statistics computed using robust standard errors adjusted for deal clustering; ***, **, * represent statistical significance (two-tailed) at 1%, 5% and 10%, respectively.							
	(1)	(2)	(3)	(4)			
Ln(Tax Haven Subs)	0.765***	0.763**	0.736***	0.771*** (3.714)			
Ln(Non-Haven Subs)	-0.315	-0.327	(3.203)	(5.714)			
Ln(OECD Subs)	(-1.577)	(-1.50+)	-0.281* (-1.756)				
Ln(EU Subs)			(-1.750)	-0.333**			
Tax Haven Sub Ratio	-1.547**	-1.590**	-1.329**	-1.382***			
Delaware	0.407***	0.403***	0.416***	(-2.052) 0.406***			
Total Assets	(2.723) 1.591***	(2.695) 1.594***	(2.780) 1.586***	(2.715) 1.589***			
Return on Assets	(10.53) 0.081	(10.53) 0.077	(10.59) 0.074	(10.53) 0.078			
Market-to-Book	(0.307) -0.000*	(0.296) -0.000*	(0.284) -0.000**	(0.293) -0.000*			
Sales Growth	(-1.852) 0.132	(-1.862) 0.136	(-2.047) 0.133	(-1.956) 0.133			
Cash	(1.109) 0.425	(1.134) 0.432	(1.114) 0.450	(1.090) 0.420			
Leverage	(0.676) -0.074	(0.688) -0.069	(0.715) -0.082	(0.668) -0.077			
R&D	(-0.425) 0.739	(-0.411) 0.792	(-0.447) 0.696	(-0.401) 0.754			
Intangible Assets	(0.642) -0.033	(0.687) -0.033	(0.603) -0.034	(0.654) -0.032			
PP&E	(-1.002) 0.453	(-0.989) 0.448	(-1.034) 0.446	(-0.974) 0.446			
	(1.433)	(1.428)	(1.407)	(1.402)			
Deal Fixed Effects	YES	YES	YES	YES			
No. of Observations	2,302	2,302	2,302	2,302			
No. of Actual Acquirers Pseudo $R^2$	437 0.367	437 0.367	437 0.368	437 0.369			

Table 8The Association between a Firm's Subsidiary Profile and the Probability of being an Acquirer