Tax Indemnification and the Association Between Unrecognized Tax Benefit Reserves and Future Tax Cash Outflows

Patrick Lee Hopkins*

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* Texas Christian University, Neeley School of Business, 2900 Lubbock Ave., Fort Worth, TX, 76109.
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Abstract: Tax indemnification transfers the risk of cash settlements associated with a firm's uncertain tax positions to an external party. Current financial reporting and disclosure standards provide little-to-no information regarding this risk transfer. By examining merger and acquisition contracts from 2008 through 2013, I find that tax indemnification is commonly present in these contracts. As the first empirical study on tax indemnification, I provide evidence that the association between current unrecognized tax benefit reserves and future tax cash outflows is positive for firms *without* tax indemnification but not significant for firms *with* tax indemnification. Moreover, I show that other associations and measures could be distorted in the presence of tax indemnification. Due to the growth of tax indemnification insurance markets, my results suggest that changes in accounting standards and/or additional disclosures may be necessary to allow financial statement users to adequately assess various tax accounts and measures when indemnification is present.

Keywords: income tax reporting; business combinations; unrecognized tax benefits; tax indemnification.

I. INTRODUCTION

I examine whether accounting standards provide sufficient information to financial statement users to assess the impact of tax indemnification on future tax cash outflows for firms completing mergers and acquisitions (M&As). Specifically, I investigate whether the presence of tax indemnification moderates the association between unrecognized tax benefit reserves (UTBs) and future tax cash outflows among firms completing M&As.[1] Tax indemnification transfers (from a taxpayer to an external party) the risk of potential cash settlements associated with uncertain tax positions. Although tax indemnification transfers the responsibility of these contingencies to an external party, Accounting Standards Codification (ASC) 805 coupled with ASC 740 require that the acquirer continue to reflect indemnified tax positions in UTBs after the M&A is completed.[2] Moreover, ASC 805 paired with Securities and Exchange Commission (SEC) guidance for

[1] UTBs represent potential tax cash outflows to tax authorities who successfully challenge the firm's uncertain tax positions; the contingent nature of UTBs differentiates them from deferred tax liabilities.
[2] Before codification, ASC 740 and ASC 805 were referred to as Financial Accounting Standards Board (FASB) Interpretation No. 48 and Statement of Financial Accounting Standards No. 141 (R), Business Combinations.

adjusting these positions when their statutes of limitations expire results in skewed effective tax rates (ETRs) which are commonly used for assessing investments. Therefore, the required accounting and lack of disclosure may hinder a financial statement user's ability to adequately assess the potential future consequences of indemnified tax positions within UTBs.[3]

Traditionally, tax indemnification was primarily provided by contract clauses to facilitate M&As. However, over the past few decades, it has become increasingly common for tax indemnification to be provided by third-party insurers (Logue, 2005; Wolfe, 2011). The development of these insurance markets has led to tax indemnification being present in other aspects of business; for example, companies utilize tax indemnification insurance to facilitate raising capital and protect against operating risk (Wolfe, 2011). Therefore, it is important to understand how the required accounting and lack of required disclosures for tax indemnification impact a financial statement user's ability to assess tax information provided in the financial statements when tax indemnification is present.

To explore tax indemnification and the related accounting issues for firms with M&As, I obtain a sample of 355 M&A contracts filed with the SEC's Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system from 2008 through 2013. I review the tax matters and indemnification sections to identify which M&A contracts include tax indemnification clauses. I find that tax indemnification clauses are present in approximately 80 percent of my sample. Using a modified model from Hanlon, Maydew, and Saavedra (2018), I document that the association between current UTBs and future tax cash outflows varies significantly in the presence of tax indemnification for firms acquiring uncertain tax positions in M&A transactions. Specifically, I find a positive association between current UTBs and future tax cash outflows for firms acquiring

[3] Practitioners share this concern. See §10.6.1 of the Price Waterhouse Cooper Guide to Income Taxes at https://www.pwc.com/us/en/cfodirect/assets/pdf/accounting-guides/pwc-income-taxes-guide.pdf.

tax positions *without* tax indemnification but no significant association for firms acquiring tax positions *with* tax indemnification. These results suggest that tax indemnification moderates the association between UTBs and future tax cash outflows for firms completing M&A transactions. These results are robust to changes in my design choices, such as using seemingly unrelated estimations instead of interaction models, using a shorter sample period, and the removal of influential observations.

Next, I attempt to identify a proxy for the presence of tax indemnification to aid financial statement users in assessing the association between UTBs and future tax cash outflows when M&A contracts are not available. First, I test whether the presence of M&As can proxy for tax indemnification due to the commonality of tax indemnification in my M&A contract sample. Using a sample of 8,567 firm-year observations from 2,237 firms, I find that firms without M&As exhibit a positive association between UTBs and future tax cash outflows while firms which completed an M&A do not exhibit this association. Furthermore, the associations are significantly different than each other when the sample is restricted to firms that report a current increase in prior year UTBs. Second, I explore whether the presence of non-public targets, M&A deals with consideration of less than $1 billion, and non-merger M&A contracts may be used as proxies for tax indemnification due to systematic differences documented in the descriptive statistics. I find that this readily available information does not adequately proxy for indemnified tax positions. For this reason, I conclude that financial statement users would benefit from having access to more specific disclosures about tax indemnification to properly evaluate the future cash flows for various tax accounts.

Lastly, I find that tax indemnification may influence a firm's ETRs. Specifically, I document that firms *with* tax indemnification have lower future mean and median generally

accepted accounting principles (GAAP) ETRs and higher future mean and median cash ETRs than firms *without* tax indemnification. The distortion of these commonly used financial measures may have a significant impact on financial statements users' decisions (i.e., evaluations of potential investments). However, further research is necessary to explore these findings.

To my knowledge, this is the first academic study to discuss the accounting and disclosure issues arising from tax indemnification and to empirically test whether tax indemnification moderates the association between UTBs and future tax cash outflows. My findings are consistent with indemnified tax positions completely moderating the association between UTBs and future tax cash outflows. Given the commonality of tax indemnification, investors in firms which report indemnified uncertain tax positions within their UTBs would benefit from disclosures of these positions separately so that they can adequately assess the expected impact of uncertain tax positions on future tax cash outflows. These findings may be useful to standard setters when considering changes to ASC 740 and ASC 805.

Furthermore, interviews with M&A consultants suggest that markets for tax indemnification insurance are growing.[4] The growth of tax indemnification insurance markets has led to tax indemnification being present in settings not related to M&As. Firms which purchase tax indemnification insurance for uncertain tax positions related to other types of transactions are susceptible to the accounting issues documented in this study. Unlike the M&A setting, it is highly unlikely that additional disclosures about the presence of tax indemnification, such as those in M&A contracts, would be available in a non-M&A setting for external financial statement users

[4] I interviewed several high-level consultants by phone on tax indemnification, tax indemnification insurance, and M&As. However, all the interviewees requested anonymity. Therefore, the interviewees' names, associated companies and titles are not disclosed for purposes of this study.

to examine. Due to the expanding tax indemnification insurance market, it is important for researchers and investors alike to understand how tax indemnification affects future tax cashflows.

My study answers the call of Hanlon and Heitzman (2010) for research on how acquirers deal with targets' prior uncertain tax positions. My results suggest that tax indemnification clauses within M&A contracts are used by acquirers to protect themselves from uncertainties surrounding a targets' prior tax positions. However, anecdotal evidence provided during interviews with key M&A consultants suggests that tax indemnification insurance is becoming more common. Due to confidentiality agreements and the lack of disclosure requirements regarding tax indemnification insurance, empirical data is not readily available to explore this insurance market.

This study also contributes to the ongoing literature stream on UTBs. In 2007, UTB reporting was standardized under ASC 740 with the goal of increasing comparability and relevance of tax reserves. Though past studies generally conclude that ASC 740 did result in more consistent disclosures of uncertain tax positions, these same studies question the informativeness of these disclosures (Gleason, Mills, and Nessa, 2018; FAF, 2012). Prior researchers have suggested that the informativeness of these disclosures are diminished because of managers' efforts to obfuscate tax strategies (Robinson and Schmidt, 2013) and because provisions within ASC 740 generally result in an overstatement of future tax cash outflows (Robinson, Stomberg, and Towery, 2016). I document a diminished association between UTBs and future tax cash outflows in the presence of indemnified tax positions which suggests tax indemnification may partially explain some findings in prior studies. Many of the extant UTB studies were performed around the initial implementation of ASC 740 with narrow time windows. Now that the ASC 740 regime has been in effect for more than a decade, Blouin and Robinson (2014) suggest that enough time has passed to reexamine the

conclusions in these early studies. This study contributes to the literature examining the long-standing usefulness of ASC 740 disclosures.

II. BACKGROUND AND HYPOTHESIS DEVELOPMENT

Tax Indemnification Insurance and Tax Indemnification Clauses

Tax indemnification protects taxpayers from potential adverse outcomes of challenged tax positions. It is mainly provided in two forms: as an insurance product or as a clause within an M&A contract. Tax indemnification insurance has two main types: protection against the known (i.e., representations and warranties insurance) and protection against the unknown (i.e., tax indemnity insurance). Over the past decade, tax indemnification insurance has become more prevalent within the business world. AIG reports that it currently provides representations and warranties insurance for M&A deals valuing at least $700 billion and tax-related items are the second most common issue for which they pay claims.[5] As for tax indemnity insurance, interviews with key M&A consultants suggest that numerous providers have entered the market in the past decade causing a decline in premiums. The entry of new market participants and the decline of premiums have led to tax indemnification insurance in other aspects of business, such as facilitating capital raising and mitigating operating risk. For example, Aon Transaction Solutions reports an increase of 500 percent in their tax indemnification coverage over a span of three years, increasing from $2.1 billion in 2013 to $12.6 billion in 2016 (Rosen and Blitz, 2017).

M&As contain many risks and are extremely complex (Karlinsky and Burton, 2011). In order to facilitate M&A deals, sellers frequently offer indemnification clauses to protect acquirers from various risks associated with the target, including risks associated with prior tax positions

[5] Per anecdotal evidence provided by interviews with key M&A consultants, they estimate that 50 to 60 percent of M&A deals have some form of representations and warranties insurance. See https://www.aig.com/content/dam/aig/america-canada/us/documents/insights/aig-manda-claimsintelligence-2018-r-and-w.pdf.

(Logue, 2005). Though a clause differs from insurance in the sense that one is a contractual obligation and the other a product, both provide protection from uncertainties surrounding tax positions. Furthermore, external parties can determine whether tax indemnification clauses are present if they have access to the M&A contracts. Tax indemnification is described in various ways in M&A contracts (i.e., it can be described as the indemnification of representations about tax matters, as holding the buyer harmless for taxes associated with pre-transaction periods or as holding the buyer harmless for "excluded liabilities" which may include taxes associated with pre-transaction periods).[6] Though tax indemnification is described in many different ways, the end result is the same; the transfer of a contingent tax liability to an external party.

After the completion of an M&A, financial statement users should exercise caution in evaluating the acquirer's UTBs. First, if a financial statement user establishes that tax indemnification is provided by the contract, then it does not necessarily mean that the acquirer will report any uncertain tax positions associated with the M&A. In other words, an acquirer may be offered indemnification even though they are not acquiring any tax positions for which the target has recorded UTBs. Second, if an acquirer does report uncertain tax positions associated with the M&A, then it does not necessarily mean they are acquired tax positions. They may be tax positions generated as part of the M&A transaction itself and therefore not subject to indemnification. These potential issues highlight the importance of requiring the separate disclosure of the components of acquisition-related UTBs.

Tax Indemnification Accounting Under ASC 805 – Business Combinations

In 2007, the FASB issued ASC 805 which addresses various aspects of business combinations, including how to record indemnified tax positions. Within the context of business

[6] Refer to Appendix B for a discussion of contract language and specific examples of contract language.

combinations, indemnified tax positions are acquired contingent tax liabilities in which the seller has agreed to hold the acquirer harmless. ASC 805 requires *mirror accounting* for indemnified liabilities. Specifically, ASC 805-20-25-27 states "the acquirer shall recognize an indemnification asset at the same time that it recognizes the indemnified item".[7] This accounting results in the recording of matching asset and liability accounts in the acquirer's financials without affecting the acquirer's equity or overall income.

When the indemnified tax position is successfully challenged and a tax payment is due or when the statute of limitations expires for the tax position, the tax indemnification asset and UTB associated with that position must be eliminated. Payouts for tax indemnification can occur in one of two ways. First, the indemnifying party may settle an indemnified tax position directly with the challenging tax authority. Second, the indemnifying party may reimburse the indemnified party for settlements paid to the challenging tax authority. In either case, the payout results in a decrease to the indemnification asset and related liability without affecting the acquirer's equity or overall income. Though the utilization of tax indemnification results in no net effect to the acquirer's overall income when the settlement amount equals the UTB, the same cannot be said about adjustments to tax indemnification accounts when there is no settlement or when the settlement does not equal the UTB booked at acquisition.

When asset and liability accounts associated with tax indemnification need to be adjusted, the adjustment results in changes to both pre-tax income and tax expense. Specifically, the tax indemnification asset is adjusted through a pre-tax account while the UTB is adjusted through tax expense.[8] The inability to reverse the original *mirror accounting* does not affect the acquirer's

[7] For example, a UTB for an indemnified tax position is *reflected* by a corresponding (mirror) tax indemnification asset under *mirror accounting*.
[8] ASC 740-10-25-8 allows benefit recognition when the tax position's statutory period expires, while SEC Code of Federal Regulations §210.5 – 03 allows only "taxes based on income tax" to be reported under income tax expense.

equity or overall income. However, it does influence pre-tax income and tax expense, creating a permanent book-tax difference and distorting ETRs; specifically, GAAP ETRs are understated and cash ETRs are overstated.[9] This permanent book-tax difference is not required to be separately disclosed in the reconciliation to the statutory tax rate or elsewhere in the tax footnote, which is problematic for investors and researchers alike when evaluating financial statements.

Potential Issues with Indemnification Disclosure and Accounting

Under ASC 805, the accounting for the payment of an indemnified tax position results in no net effect on overall net income or equity for the indemnified acquirer. However, the inclusion of indemnified tax positions in the acquirer's UTBs may reduce the informativeness of these reserves. Consider that ASC 740 requires UTB liabilities to be separately disclosed and discussed, but neither ASC 740 nor ASC 805 require that the presence of indemnification be disclosed or discussed, potentially resulting in an undisclosed asset. Therefore, financial statement users may be unable to differentiate indemnified liabilities from "normal" liabilities.[10]

Furthermore, there are disclosure issues when adjusting indemnified tax positions for fulfillment. Specifically, neither ASC 740 nor ASC 805 address how tax cash outflows associated with fulfillments should be disclosed in cash taxes paid on the cash flow statement, which results in two different disclosure scenarios. In scenario one, the indemnified party nets out the effect of taxes paid reflecting that the indemnified party did not pay the taxes. In scenario two, the indemnified party reflects the payment to the taxing authority in cash taxes paid. Both scenarios have issues. In scenario one, the exclusion of the payment from cash taxes paid reduces the informativeness of UTBs; specifically, the UTB is not informative about future cash outflows

[9] See Appendix C for an illustrative example of the accounting and potential issues associated with indemnified tax positions.

[10] The disclosure of indemnified tax positions is allowable and therefore a firm may choose to voluntarily disclose this information. Per my review of income tax disclosures, the norm is not to disclose this information.

surrounding the indemnified uncertain tax position. In scenario two, the reflection of taxes paid by an external party distorts tax cash outflows and cash ETRs; specifically, cash taxes paid are overstated which results in the cash ETR being overstated. In other words, current disclosure requirements (or lack thereof) may hinder ASC 740's original purpose of UTBs providing information about potential future tax cash outflows.

Prior Research on Tax Indemnification

To my knowledge, no prior studies have examined the impact of tax indemnification on the informativeness of UTBs. However, two papers have discussed the tax indemnification insurance market (Logue, 2005; Wolfe, 2011). Logue (2005) discusses the emergence of the market for tax indemnification insurance and potential hazards of these emerging markets, including the possibility of tax indemnification insurance for legal uncertainty becoming insurance for detection uncertainty. If tax indemnification insurance becomes synonymous with detection insurance, then Logue warns that tax authorities may see a rise in tax sheltering. However, various insurance providers, such as AON Transaction Solutions, state that tax shelters are uninsurable.[11] Wolfe (2011) discusses the many uses of tax indemnification insurance. For instance, Wolfe points out that firms are increasingly using tax indemnification insurance to facilitate capital raising and lower operating risk in addition to its traditional use of facilitating M&As. Furthermore, he discusses the complexities of determining the deductibility and taxability of payments sent and received under tax indemnification insurance policies. He suggests that there is not one clear path to make these determinations and that all facts must be considered. In my setting, contracts normally specify that the receipt of any indemnification payments under an indemnification clause will be accounted for as an adjustment to the M&A purchase price and/or the basis of the acquired

[11] See https://www.aon.com/attachments/risk-services/afs/FIN-48-FAQs.pdf.

assets for tax purposes.

Tax indemnification insurance is similar to tax indemnification clauses in that both transfer tax risk to an external party. In both cases, the indemnified party is required to report the indemnified tax positions as liabilities under ASC 740 with a corresponding (mirror) asset on the balance sheet. However, they differ in that tax indemnification insurance has a purchase price set by a third-party insurer, while tax indemnification clauses are valued into a contract price. To my knowledge, there are no empirical studies on tax indemnification insurance or tax indemnification clauses. Hanlon and Heitzman (2010) recognized this gap in the literature and called for research on tax indemnification insurance. Specifically, they call for research into the frequency of tax indemnification insurance and how this insurance is priced. My study is a first step toward filling this gap in the literature.

Prior Research on Tax Reserves

In 2007, the FASB issued ASC 740 to facilitate the comparability of financial statements and standardize tax reserve reporting. Previously, tax reserves were evaluated as contingent losses under FASB's Statement of Financial Accounting Standards, No 5. Studies of the pre-ASC 740 era conclude that disclosures about tax reserves were often inadequate for assessing tax uncertainties (Gleason and Mills, 2002; Dhaliwal, Gleason, and Mills, 2004; Gupta, Laux, and Lynch, 2016). Under ASC 740, firms assess the likelihood of successfully defending authoritative challenges of uncertain tax positions. In determining this likelihood, they assume that positions will be challenged and that the challenging authority will have access to all private information regarding the positions. If the firm determines that an uncertain tax position will "more-likely-than-not" be successfully defended, then they assess the associated benefits using a benefit-recognition approach. Any benefits that are associated with positions failing to meet the "more-

likely-than-not" threshold are recorded as contingent liabilities.

Since the issuance of ASC 740, several academic studies explore the informativeness of UTBs (Guenther, Matsunaga, and Williams, 2017; Robinson et al., 2016; Hanlon et al., 2018; Ciconte, Donohoe, Lisowsky, and Mayberry, 2016: Nesbitt, 2014). Guenther et al. (2017) find that UTBs, predicted using Rego and Wilson's (2012) UTB reserve model, are not associated with the volatility of future cash ETRs. Robinson et al. (2016) find that ASC 740 reduced the ability of tax accounts to predict future tax cash outflows. In contrast, Hanlon et al. (2018), Ciconte et al. (2016) and Nesbitt (2014) suggest that UTBs are informative about future tax cash outflows. Hanlon et al. (2018) and Ciconte et al. (2016) find that UTBs are positively associated with future tax cash outflows. Nesbitt (2014) finds that the non-discretionary portion of UTBs is positively associated with future taxes paid but the discretionary portion has no association with future taxes paid.

Academics have suggested that complexities and standards of ASC 740 (De Simone, Robinson and Stomberg, 2014; Robinson and Schmidt, 2013; Robinson et al., 2016; Cazier, Rego, Tian, and Wilson, 2015), variations in the behaviors and characteristics of firms (Lisowsky, Robinson, and Schmidt, 2013; Gleason et al., 2018; FAF, 2012; Bozanic, Hoopes, Thornock, and Williams., 2017; Abernathy, Beyer, Gross, and Rapley, 2017) and complexities in tax law (FAF, 2012) may lead to substantial variation in the informativeness of UTBs. I examine whether the presence of indemnified tax positions also hinders the informativeness of UTBs. I fill a gap in prior literature by addressing the impact of tax indemnification on the association between UTBs and future tax cash outflows.

Development of Hypothesis

UTBs are reserves for uncertain tax positions that may result in future tax cash outflows and are reflected on a firm's financial statements. By utilizing the SEC's EDGAR system, tax

authorities can access a firm's financial statements, including a firm's uncertain tax position disclosures, which may influence their decision to audit the firm. Thus, firms with higher UTBs are more likely to be audited by tax authorities and those authorities are likely to focus on tax positions underlying UTBs; this reasoning is consistent with findings from Bozanic et al. (2017).

The settlement of tax audits will likely result in the auditee paying more in taxes, interest, and penalties. Therefore, current UTBs should be useful for estimating future tax cash outflows. Consistent with this reasoning, Robinson et al. (2016) document that a portion of these reserves result in cash outflows. In addition, Hanlon et al. (2018), Ciconte et al. (2016) and Nesbitt (2014) document that UTBs are positively associated with future tax cash outflows. In line with these prior studies, I expect UTBs to be positively associated with future tax cash outflows when firms' uncertain tax positions are not indemnified.

However, the presence of uncertain tax positions that have been indemnified may moderate the positive association between current UTBs and future tax cash outflows. An indemnified tax position that is successfully challenged results in a net cash outflow for the indemnifier. However, the indemnified party, which reflects the indemnified uncertain tax position, would experience minimal, if any, cash outflows. Therefore, financial statement users should consider the presence of indemnified tax positions when assessing UTBs.

The practice of offering indemnification to acquirers is commonly used by sellers to facilitate M&As. Though the indemnified tax position is not the responsibility of the acquirer, the acquirer in an M&A is responsible under ASC 805-740-25-2 to report uncertain tax positions associated with the target and the transaction. In line with this standard, Lisowsky et al. (2013) document a positive association between the presence of M&As and levels of UTBs. Furthermore, Towery (2017) analyzes the composition of items reported by U.S. firms on the 2010 Schedule

UTP and documents that a significant component of uncertain tax positions relates to M&As.[12] Therefore, the mere presence of an M&A may significantly increase the level of UTBs. However, the presence of an indemnification clause would effectively transfer the responsibility of the contingency to the indemnifier. This transfer of responsibility would reduce the usefulness of the acquirer's UTBs for assessing future tax cash outflows, especially if the acquirer records indemnified tax positions within their UTBs. For this reason, I expect that the association between current UTBs and future tax cash outflows to vary between firms which report indemnified tax positions and those that do not. However, it is possible that indemnified tax positions may be immaterial when compared to all uncertain tax positions. If indemnified tax positions are immaterial, on average, I expect similar associations between UTBs and future tax cash outflows for firms which report indemnified tax positions and those that do not. In line with this reasoning, my hypothesis in alternative form is formally stated as follows:

H_1: For firms engaging in an M&A transaction, the association between UTBs and future tax cash outflows is less positive for firms that have indemnified uncertain tax positions than for those that do not.

III. EMPIRICAL METHOD AND RESULTS

Methodology

The focus of this study is whether the association between current UTBs and future tax cash outflows varies in the presence of indemnified tax positions. To explore whether this variation exists amongst firms obtaining uncertain tax positions from M&As, I fully interact the presence of

[12] Schedule UTP requires the disclosure of uncertain tax positions taken on U.S. federal tax returns which require a UTB reserve or would have required a reserve but the reporting firm did not record the reserve due to expectations of future litigation (Internal Revenue Service, 2018).

indemnification clauses, $INDEMN_t$, with variables expected to explain future tax cash outflows, $FUT\_TXPD_{t+4,}$.[13] The model is as follows:

$$FUT\_TXPD_{t+4} = \beta_0 + \beta_1\ INDEMN_t + \beta_2\ UTB_t + \beta_3\ INDEMN_t * UTB_t + \beta_k\ CONTROL_k + \beta_j\ INDEMN_t * CONTROL_k + \varepsilon_t \quad (1)$$

FUT_TXPD_{t+4} is the log of the ratio of cumulative tax cash outflows over years t+1 through t+4 to ending total assets in year t and represents my measure of future tax cash outflows. $INDEMN_t$ is an indicator variable equal to one if the observation obtained indemnification through the obtained M&A contract, zero otherwise. Indemnification may (or may not) affect future tax cash outflows depending on whether the acquirer obtained (or did not obtain) any indemnified tax positions. Therefore, I offer no prediction on the main effect of $INDEMN_t$. UTB_t is my variable of interest and represents UTBs scaled by ending total assets in year t. In line with prior research, the coefficient on UTB_t is expected to be positive ($\beta_2 > 0$) and reflects the association between UTBs and future tax cash outflows for the subsample of firms not obtaining indemnification from the M&A contract. The joint effect of interest ($\beta_2 + \beta_3$) is expected to be lower than the association documented on UTB_t and reflects the association between UTBs and future tax cash outflows for the subsample of firms obtaining indemnification from M&A contracts. The interaction alone between $INDEMN_t$ and UTB_t is expected to be negative ($\beta_3 < 0$) and tests whether the association of interest varies between the two subsamples.

$CONTROL_k$ is a vector of control variables. $CONS_t$ is the ratio of total M&A consideration value reported within the observation's 10-K to ending total assets in year t.[14] Consideration paid during an M&A can provide substantial tax benefits to the acquiror through cost recovery

[13] Univariate tests indicate that the correlations between the control variables and the dependent variable differs across the two subsamples of contracts; therefore, these variables should be allowed to vary across the subsamples. To address this, I utilize a full interaction model. As a robustness test, I perform a seemingly unrelated estimation approach and find similar inferences.

[14] I hand-collected the consideration paid amount from the observation's associated 10-K disclosures.

deductions. As consideration paid becomes a larger component of ending assets, acquirors should experience larger immediate reductions in future tax cash outflows. Therefore, I predict a negative association between $CONS_t$ and future tax cash outflows. $NOLCF_t$ is the ratio of net operating loss (NOL) carryforwards scaled by ending total assets in year t. NOL carryforwards offset future taxable income and result in reductions to future tax cash outflows. Therefore, $NOLCF_t$ is predicted to have a negative association with future tax cash outflows. $TXPD_t$ is the ratio of taxes paid to ending total assets in year t, while Δ_TXPD_t is the difference in taxes paid in year t-1 to year t, scaled by ending total assets in year t. Consistent with prior research, I expect a positive coefficient for $TXPD_t$ and a negative coefficient for Δ_TXPD_t. Δ_PTBI_t is the difference in pretax book income in year t-1 to year t, scaled by ending total assets in year t. Due to the stickiness of earnings, increases in taxable income should result in persistent increases to future tax cash outflows. Therefore, I predict a positive association between changes in pretax book income and future tax cash outflows. DT_A_t and DT_L_t represent deferred tax assets and liabilities. If gross deferred tax assets exceed the valuation allowance (which represents management's expectations of the firm's ability to generate income to utilize the assets) and any deferred tax liabilities, then DT_A_t, reflects the amount of net deferred tax assets as a positive number and zero otherwise. If gross deferred tax liabilities exceed gross deferred tax assets less the valuation allowance, then DT_L_t reflects the net deferred tax liabilities as a negative number and zero otherwise. Deferred tax assets (liabilities) should be indicative of reductions (additions) to future tax cash outflows and therefore should have a negative association with future tax cash outflows. The definitions of all variables are summarized in Appendix A. All models cluster errors by firm and include year fixed effects.[15]

[15] I exclude industry fixed effects in these small sample regressions to maximize the regression's degrees of freedom. As a robustness test, I include industry fixed effects and find similar inferences.

Model (1) is similar to the model used in Hanlon et al. (2018) with four modifications. I utilize a four-year window for the dependent variable, FUT_TXPD_t, instead of the five-year window utilized in Hanlon et al. (2018) for two reasons. The first reason is that the statute of limitations for U.S. federal income tax returns is generally three years beginning on the date the return is filed. Therefore, a position taken in year t is generally subject to scrutiny for up to four years, the year of filing, year t+1, through the expiration of the statute, year t+4. Second, using only four years prevents a significant reduction in my sample size. I also include an additional control variable, $CONS_t$, because future taxes paid may be reduced by future tax deductions that are increasing with the consideration paid in an M&A, as discussed above. Furthermore, I split the control variable for deferred tax assets and liabilities into DT_A_t and DT_L_t due to contracts often securing acquired deferred tax assets for potential indemnification claims and the possibility of indemnified tax positions being intertwined with deferred tax liabilities. Lastly, I interact all explanatory variables with $INDEMN_t$ to allow associations to vary across observations with and without indemnification. Earlier reasoning suggests that the presence of indemnification may mitigate associations for unrecognized tax benefit reserves, net operating loss carryforwards, deferred tax assets and deferred tax liabilities with future tax cash outflows and therefore these associations should be allowed to vary across firms with and without indemnification; these interactions accomplish this goal.

Sample Selection

To explore the implications of reporting indemnified tax positions, I begin by identifying a pool of firm-year observations for which M&A contracts may be available on the SEC's Edgar database. Specifically, I merge all firm-years available in the *Compustat* North America database from the years 2008 thru 2013 that have more than $1,000,000 in total assets with data from the

Thomson SDC Platinum Mergers and Acquisitions database, resulting in 46,447 firm-year observations from 10,954 public firms.[16] Next, I remove observations with negative total assets or sales, real estate investment trusts (REITs), foreign filers, and observations without all necessary data, which results in 8,567 firm-year observations from 2,237 firms. I then remove observations which did not complete an M&A during the observation firm-year which results in 2,630 firm-year observations from 1,065 firms. To reduce the confounding effects of multiple M&A contracts with varying terms during the same fiscal year, I remove observations with more than one completed M&A during the observation firm-year. The final pool of observations for which M&A contracts may be available consists of 1,320 firm-year observations from 846 firms.

Using this pool of firm-years, I attempt to locate the M&A contract associated with the completed M&A by manually searching 8-Ks, 10-Qs, and 10-Ks filed by the firm and by using Seek INF, an EDGAR search tool provided by Seek EDGAR. Of the 1,320 firm-year observations, 326 firms filed 375 M&A contracts (28.41 percent of potential contracts were located). Many contracts are not available because the firm determines a contract is not material under SEC Regulation S-K and, therefore, the firm is not required to file the contract or the firm may request that a filed contract remain confidential. However even if a contract is not required to be filed, management may choose to voluntarily file the contract with the SEC. After reviewing the

[16] Blouin, Gleason, Mills, and Sikes (2010) document preemptive removal and reestablishment of tax reserves around the implementation of ASC 740, effectively contaminating UTBs in 2006 and 2007. Therefore, I begin my study in 2008 to avoid any contamination from this documented behavior. Though my sample runs from 2008 through 2013, I require data through 2017 to calculate my dependent variable, FUT_TXPDt+4. Furthermore, I omit 2017 as a robustness test due to the Tax Cuts and Jobs Act of 2017 requiring firms to treat post-1986 untaxed foreign earnings as if they had been repatriated and remit a transition tax accordingly. Due to the significant burden created by this tax law change, Congress allowed this tax to be paid over time starting in 2017, possibly creating spikes in cash taxes paid. To ensure table 5 results are not the product of these spikes in cash taxes paid, I exclude observations which require 2017 data (year t is 2013) and find similar inferences.

available contracts, I remove 20 contracts from 19 firms because the contracts do not disclose the seller's representations about the target or whether indemnification was provided by the seller. The final sample of contracts consists of 355 firm-year observations (contracts) from 307 firms.[17]

Descriptive Statistics

Table 2 presents various descriptive statistics on the presence of indemnification clauses within the 355 hand-collected contracts. Table 2, Panel A shows that the contracts consist of 121 merger contracts, 105 asset purchase contracts, and 129 interest purchase contracts.[18] Of the 355 contracts, 282 contracts provide tax indemnification to the acquirer through the indemnification of tax representations provided by the seller about the target. Specifically, 79.43 percent of the buyers in the contract sample are indemnified by the seller from losses associated with tax misrepresentations. Furthermore, 162 of those 282 contracts require escrow accounts to be maintained to secure possible indemnification claims.

Table 2, Panel B reflects that 52.89 percent of merger contracts, 92.38 percent of asset purchase contracts, and 93.80 percent of interest purchase contacts provide tax indemnification. Panel C reflects that as M&A deals become larger, it is less likely for tax indemnification to be present. Specifically, 88.65 percent of M&A deals valued at less than $100 million have tax indemnification clauses, while 37.14 percent of M&A deals valued at over $1 billion have tax indemnification clauses. Lastly, Panel D suggests that approximately 93.88 percent of M&A deals in which the target is a subsidiary or a private company have tax indemnification. However, it

[17] In untabulated analyses, I examine the generalizability of the final contract sample to a larger population of firms. Specifically, I compare the industry composition of the contract sample to the industry composition of the full sample with model variables. When comparing industries by observation count, eight industries of the top ten industries overlap between the two samples. These eight industries comprise 50.70% and 44.53% of the contract and full samples. The nine industries not reflected by the contract sample comprise only 3.14% of the full sample. Based on these observations, I conclude that the contract sample is generalizable to a larger population of firms.

[18] Interest purchase contracts refer to stock purchase contracts, partnership interest purchase contracts, and equity interest purchase contracts.

appears that when one public company absorbs another public company, tax indemnification is normally not present.[19]

Table 2, Panel E reports that 39 industries of the potential 48 Fama-French industries are present in my contract sample. Approximately 30 percent of my contract sample are from the business service, electronic equipment, and computer industries, while less than one percent of my contract sample are from the fabricated product, tobacco product, and utility industries. The business service, electronic equipment, and computer industries have indemnification frequencies of 72.00 percent, 75.00 percent, and 84.21 percent, respectively. Focusing on industries which are represented in my sample by more than 10 contracts, I find that the wholesale industry has the highest frequency of tax indemnification clauses (100.00 percent), while the pharmaceutical product industry has the lowest frequency of clauses (43.75 percent).

Table 3, Panel A presents descriptive statistics for my entire contract sample. Firms included in my sample are primarily large firms with an even split between multinational firms and domestic-only firms; specifically, average (median) year-end assets are approximately \$2.5240 (\$0.7641) billion and 49.90 percent of the firm-years have multinational operations. The average firm-year observation experiences tax cash outflows of approximately 8.54 percent of year-end assets over the subsequent four years and has UTBs equal to 1.31 percent of ending total assets. These reserves are economically significant and comparable to Hanlon et al.'s (2018) UTB reserve percentage of one percent.

Table 3 also presents descriptive statistics for the subsamples of observations without (Panel B) and with indemnification (Panel C). Firms which do not obtain indemnification tend to

[19] This finding is supported by anecdotal evidence obtained from interviews with key M&A consultants, who suggest tax indemnification clauses are almost never present in public-to-public mergers. They suggest it is difficult to convince selling shareholders to provide personal guarantees or escrow funds to service indemnification claims. As a robustness test, I remove public-to-public M&As and find similar inferences.

be larger (mean of $4.8640 billion versus $1.9180 billion; t-stat = 4.6407; p-value < 0.01) and more highly levered (mean of 42.50 percent versus 23.70 percent; t-stat = 4.9293; p-value < 0.01), and pay more for M&As as a percentage of last year assets (mean of 25.90 percent versus 14.00 percent; t-stat = 7.0732; p-value < 0.01) than firms which do obtain indemnification which may be due to a higher concentration of public-to-public M&As within the subsample of firms without indemnification. Furthermore, the lower UTBs as a percentage of ending total assets (mean of 1.84 percent versus 1.17 percent; t-stat = 2.5536; p-value < 0.01) and lower NOL carryforwards as a percentage of beginning assets (mean of 47.10 percent versus 20.60 percent; t-stat = 2.8427; p-value < 0.01) may be the result of more private companies being represented by the subsample of firms with tax indemnification. Specifically, these smaller ratios may be due to some private company targets being flow-through tax entities without any UTBs or NOL carryforwards on their financial statements.

Table 4, Panel A presents Pearson (below diagonal) and Spearman (above diagonal) correlations for all model variables for the full contract sample, while Panels B and C present the same statistics for firms without indemnification and those with indemnification, respectively. Correlations which are highly significant (p-value < 0.01) are in bold-face type. As expected, the correlation between future cash taxes paid and current UTBs is significant. However, contrary to expectations, this correlation is negative. This may occur because the UTBs are positively associated with the amount of NOL carryforwards. NOL carryforwards provide significant reductions to future cash taxes paid by reducing future taxable income. Therefore, firms can utilize NOL carryforwards to offset increases to tax cash outflows resulting from successfully challenged uncertain tax positions, which reinforces the need to include this control variable in multivariate tests. Remaining correlations are not discussed for brevity.

Results

Full Contract Sample

Table 5, Column 1 presents Model (1) results from using the full sample of M&A contract firm-years. As predicted, I find that future tax cash outflows are positively associated with current UTBs for firms that do not have tax indemnification (β_2 = 15.5620; p-value < 0.05). Moreover, there is no significant association between current UTBs and future tax cash outflows for firms that do have tax indemnification ($\beta_2 + \beta_3$ = -0.0743; p-value = 0.99). Most importantly, the association for firms with indemnification is significantly lower when comparing the association to firms without indemnification (β_3= -15.6363; p-value < 0.10) which supports H_1. These results suggest that UTBs are less useful for predicting future tax cash outflows in the presence of indemnified tax positions.

Contrary to my prediction, there is no significant association between $CONS_t$ and future tax cash outflows for firms without indemnification (β_4 = -0.6838; p-value = 0.15) or for firms with indemnification ($\beta_4 + \beta_5$ = 0.0610; p-value = 0.93). The inability to document a significant association between the consideration paid for the target and future tax cash outflows of the acquirer may be due to acquisitions providing a new source of income for the acquirer while also providing substantial tax breaks for the acquirer. The results for the other control variables are in line with my predictions. Specifically, $NOLCF_t$ has a highly significant, negative association with future tax cash outflows for both firms without indemnification (β_6 = -0.9984; p-value < 0.01) and firms with indemnification ($\beta_6 + \beta_7$ = -0.5067; p-value < 0.01). These highly significant, negative coefficients are consistent with NOL carryforwards providing significant reductions in future taxable income when present. $TXPD_t$ has highly significant, positive associations with future tax cash outflows for firms without indemnification (β_8 = 42.9616; p-value < 0.01) and firms with indemnification ($\beta_8 + \beta_9$ = 36.6543; p-value < 0.01). These highly significant, positive coefficients

suggest that levels of taxes paid in the current year are persistent in future years. Δ_TXPD_t has significant, negative associations with future tax cash outflows for firms without indemnification (β_{10} = -18.5973; p-value < 0.05) and firms with indemnification ($\beta_{10} + \beta_{11}$ = -10.6497; p-value < 0.10). These significant negative associations suggest that current changes in taxes paid which are not explained by changes in taxable income are mean reverting and not persistent, likely due to spikes or dips in taxes paid from tax authority settlements or utilization of one-time tax assets (i.e., the utilization of NOL carryforwards or credits). Δ_PTBI_t has a significant, positive association with future tax cash outflows for firms without indemnification (β_{12} = 1.9637; p-value < 0.05). However, firms with indemnification exhibit an insignificant, positive association between changes in pretax book income and future tax cash outflows ($\beta_{12} + \beta_{13}$ = 1.0970; p-value = 0.14). These positive associations are in line with prior studies which suggest earnings changes are persistent. Therefore, an increase in pre-tax book income today results in more future taxable income and, thus, higher future cash taxes paid.

Contrary to expectations, DT_A_t does not have a significant association with future tax cash outflows for firms without or with indemnification (p-values = 0.23 and 0.85, respectively). The lack of an association may be due to $NOLCF_t$ subsuming the explanatory power of DT_A_t since deferred tax assets often consist of NOL carryforwards. I do find that future tax cash outflows are negatively associated with deferred tax liabilities for firms that do not have tax indemnification (β_{16} = -6.1392; p-value < 0.05). However, firms that have tax indemnification do not exhibit this same association ($\beta_{16} + \beta_{17}$ = 0.0687; p-value = 0.98). In fact, the association for firms with indemnification is significantly different than the association for firms without indemnification (β_{17} = 6.2079; p-value < 0.10). This finding may be due to deferred tax liabilities being intertwined with uncertain tax positions; for instance, a decision to accelerate the cost recovery of an intangible

asset in a scenario where tax law is unclear about the acceleration may result in a deferred tax liability for a portion of the tax benefit and an uncertain tax benefit reserve for the remainder of the tax benefit. Therefore, it is possible that the indemnification of uncertain tax positions may also result in the indemnification of net deferred tax liabilities, resulting in no association with future tax cash outflows for M&A firms with indemnification. It is not clear why this difference arises, however, overall, this result provides weak evidence that net deferred tax liabilities may also be covered by tax indemnification clauses. Therefore, financial statement users should exercise caution when utilizing deferred liabilities to develop expectations of future tax cash outflows in the presence of tax indemnification.

Subsamples of Contract Firms

It is possible that firms may obtain indemnification from an M&A contract while not obtaining any uncertain tax positions subject to indemnification from the target. Therefore, I attempt to proxy for firms obtaining indemnified uncertain tax positions from the target in two different ways: (i) as firms which report increases to UTBs due to M&As and prior tax positions and (ii) as firms which report increases to UTBs due to M&As and prior tax positions but omitting firms with asset purchase contracts.[20]

As discussed earlier, the FASB standardized the accounting for acquired tax positions, but it has not standardized the required disclosures about these positions. For this reason, companies can choose to disclose or not disclose the amounts of uncertain tax positions that were acquired in an M&A. I examine all 10-K acquisition and income tax disclosures associated with located M&A contracts and identify all observations which disclose the acquisition of uncertain tax positions. My review suggests that most firms engaging in M&As do not separately disclose acquired

[20] For these tests, I hand-collect UTB reserve reconciliation data from the observation's associated 10-K filed with the SEC's EDGAR system.

uncertain tax positions in the reserve reconciliation or within the income tax footnote disclosures. Specifically, I find that only 51 observations disclose the amount of uncertain tax positions, whether generated or acquired, that are associated with the M&A in the UTB reserve reconciliation or income tax footnote disclosures; only one observation separated the indemnified portion of these uncertain tax positions from the generated portion.[21] Most of the firms that disclose acquired uncertain tax positions report them separately in the UTB reserve reconciliation. However, some firms disclose this information in the income tax footnote disclosures and report the positions as increases to prior year tax positions in the UTB reserve reconciliation.

Due to the low rate/lack of disclosure of indemnified tax positions, I attempt to proxy for firms acquiring indemnified uncertain tax positions. First, I limit my sample only to observations that report increases to UTBs due to *either* prior tax positions or acquisitions, which yields 223 observations, 48 without indemnification and 175 with indemnification. Table 5, Column 2 presents the results of estimating Model (1) for this subsample. Consistent with the full contract sample, I continue to document that the association between future tax cash outflows and UTB_t is positive for firms without indemnification ($\beta_2 = 22.7490$; p-value < 0.05), not significant for firms with indemnification ($\beta_2 + \beta_3 = 2.1539$; p-value = 0.58), and lower for firms with indemnification ($\beta_3 = -20.5951$; p-value < 0.05), which supports H_1. These results continue to suggest that UTBs are less useful for assessing future tax cash outflows in the presence of indemnified tax positions.

To further isolate a subset of firms which are directly affected by the accounting for uncertain tax positions required under ASC 805 and ASC 740, I remove all asset purchase contracts for my second proxy test. Unless substantially all of a target's assets are acquired, it is possible

[21] I use these 51 observations in a separate regression and find a positive (negative) association between UTBs (the interaction) and future tax cash outflows. However, likely due to the significant drop in statistical power, neither of these coefficients are significant.

that the acquisition of a target's assets by means of an asset purchase contract may not result in an ASC 805 requirement to record indemnified tax positions of the target. Therefore, I remove all observations with asset purchase contracts which yields 168 observations, 45 without indemnification and 123 with indemnification. Model (1) results for this subsample are shown in Table 5, Column 3. For this subsample, the association between future tax cash outflows and UTB_t is positive for firms without indemnification ($\beta_2 = 24.8950$; p-value < 0.01) but not significant for firms with indemnification ($\beta_2 + \beta_3 = -3.2544$; p-value = 0.60). Moreover, I continue to document in Column 3 that firms with indemnification exhibit a significantly lower association between UTBs and future tax cash outflows when compared to firms without indemnification ($\beta_3 = -28.1494$; p-value < 0.01).

Results from the full contract sample and for the subsamples shown in Table 5 provide evidence that the association between UTBs and future tax cash outflows is lower when UTBs contain indemnified tax positions.[22] My results suggest that financial statement users would benefit from more information about acquired uncertain tax positions and the impact that tax indemnification has on these positions in the financial statements to facilitate their evaluation of a firm's tax positions and development of expectations of a firm's future tax cash outflows.

IV. ADDITIONAL ANALYSES

Proxies for Tax Indemnification

Earlier results suggest that the identification of contracts with tax indemnification may benefit financial statement users. However, M&A contracts are not filed often; specifically, I was only able to locate 26.89 percent of the contracts from my potential contract pool. Therefore, I attempt to identify a proxy for the presence of tax indemnification to aid financial statement users

[22] As a robustness test, I remove influential observations using DF betas and find similar inferences.

in assessing the association between UTBs and future tax cash outflows when M&A contracts are not available. My examination of available M&A contracts suggests that approximately 80 percent of all M&A contracts contain tax indemnification clauses. Due to this high frequency, the presence of an M&A may proxy for the presence of tax indemnification clauses in a larger sample of firms. To test this possibility, I follow earlier sample selection techniques but only remove observations from foreign filers and REITs, observations without all necessary data and observations with negative sales or assets. My final sample for proxy tests consists of 8,567 firm-year observations (5,937 without a current year M&A and 2,630 with at least one current year M&A) from 2,237 firms. With this sample, I utilize the following fully interacted model to test for differences in the association between current UTBs and future tax cash outflows using the presence of an M&A to identify firms without and with indemnification:

$$FUT\_TXPD_{t+4} = \beta_0 + \beta_1 PROXY_t + \beta_2 UTB_t + \beta_3 PROXY_t * UTB_t + \beta_k CONTROL_k + \beta_j PROXY_t * CONTROL_k + \varepsilon_t \quad (2)$$

$PROXY_t$ represents the presence of the characteristic proxying for indemnification and is an indicator variable equal to one if the characteristic is present, zero otherwise. Table 6, Column 1 presents results using the presence of an M&A as a proxy for indemnification, while Column 2 presents similar tests but omits observations not reporting increases to prior uncertain tax positions. Consistent with tests using the full contract sample, I find that firms without M&As have a positive association between UTBs and future tax cash outflows (β_2 = 3.7675 and 2.5222; p-values < 0.05 and 0.10) and firms with M&As do not exhibit this association ($\beta_2 + \beta_3$ = 2.1714 and -1.3210; p-values = 0.35 and 0.56). However, the association for firms with M&As is only significantly lower than firms without M&As in Column 2 (β_3 = -3.8432; p-value < 0.10) when attempting to isolate M&As that may have acquired tax positions. These results suggest that the presence of an M&A is not by itself an adequate proxy for tax indemnification. However, identifying firms with M&As

that also report increases to prior uncertain tax positions may proxy for indemnification when the indemnification status is unknown.

Descriptive statistics in Table 2 document that approximately 93.69 percent of non-public M&As, 84.06 percent of M&As with less than $1 billion in consideration paid, and 93.16 percent of non-merger M&As in my sample have indemnification. Due to these high frequencies, it is possible that this readily available information may proxy for the presence of indemnification when contracts are not available. To test this possibility, I utilize the M&A proxy test sample but remove all observations with more than one M&A during the year.[23] This sample consists of 7,257 firm-year observations from 2,157 firms. Results from Table 6 suggest that neither of these proxies adequately identify firms with indemnification. Therefore, users of these proxies should exercise caution when interpreting results which rely on these proxies.

Indemnified Tax Positions and ETRs

As discussed in section 2, adjustments to indemnified uncertain tax positions in future years under ASC 805 and SEC guidance potentially result in understated GAAP ETRs and overstated cash ETRs in future years. However, the understatement and overstatement may not be severe if the indemnified firm receives reimbursements under the indemnification agreement that are close to the initial amount recorded for the indemnified tax positions or if these initial positions were immaterial in comparison to overall tax expense. To explore the severity of this issue, I present in Table 7 future GAAP and cash ETR averages, means and tests of differences between those statistics for the subsamples used in Table 5; specifically, Table 7 presents the subsequent four-year cumulative GAAP ETRs, $GETR_{t+4}$, and the subsequent four-year cumulative cash ETRs,

[23] Firms can have multiple M&As of varying characteristics in a given year which can complicate interpreting results; for instance, an observation can have a merger contract for a private target and an asset purchase contract for a public target within the same year. Therefore, I remove all observations with more than one M&A to ease modeling and interpreting these proxy tests.

$CETR_{t+4}$ for observations without indemnification, observations with indemnification, and observations without M&As.

Results indicate that when M&As are not present, future GAAP and cash ETRs are similar (t-statistic = 0.2525; p-value = 0.80). However, firms engaging in M&As experience a gap between their GAAP and cash ETRs; this gap is significant in Panels B, C, and D for observations without indemnification (t-statistic = 2.2564, 2.1105, and 1.7566; p-values < 0.05). This gap may be due to non-indemnified M&A firms having larger beginning NOL carryforwards than both no M&A firms and indemnified firms (47.10 percent versus 24.40 percent and 20.60 percent of beginning assets). Future GAAP ETR means for firms with indemnification are lower than the means for firms without indemnification in the years following an M&A in Panels B, C, and D; however, the difference is only statistically significant in Panel D (0.3159 > 0.1412, t-statistic = 1.6938, p-value < 0.10). Furthermore, future cash ETR means for firms with indemnification are higher than the means for firms without indemnification in the years following an M&A in all four panels; however, the difference is only statistically significant in Panel A (0.1061 < 0.2279, t-statistic = 1.8164, p-value < 0.05). These results are suggestive that the accounting for the removal of expired indemnified tax positions may distort both GAAP and cash ETRs, but these univariate tests have limited statistical power and further research is necessary to adequately explore this issue.

V. CONCLUSION

Answering the call of Hanlon and Heitzman (2010) for research on how acquirers deal with targets' uncertain tax positions, I find that tax indemnification is commonly present in M&A contracts to minimize the acquirer's exposure to the targets' tax uncertainties when targets are not public. The indemnification of uncertain tax positions results in several accounting issues. First, the existence of third-party contingencies within UTBs may decrease the usefulness of these

reserves for estimating future tax cash outflows. Second, the presence of indemnification may distort the associations between net deferred tax assets (liabilities) and future tax cash outflows. Third, the adjustment of indemnified tax positions may distort both GAAP and cash ETRs. Because of the significant impact that tax indemnification has on various tax accounts, practitioners' concerns about the accounting for tax indemnification are validated. Researchers, auditors and investors alike should consider the potential impact of tax indemnification when developing tax risk and expectation models. Furthermore, additional studies may be warranted to further explore tax indemnification's potential impact on firm valuation, ETR, net deferred tax asset (liability) and accrual-quality related issues. Additional analyses suggest that the presence of M&As and other readily available information about M&As is not an adequate proxy for indemnification. Therefore, researchers should rely on filed M&A contracts when examining the potential impact of tax indemnification on prior research and designing future research on UTBs.

The documented results and conclusions are subject to several caveats. First, I am only able to obtain contracts for M&As which the reporting firm chose to file. Performing regressions on the full population of M&A contracts may result in different conclusions. Second, firms often do not file the supporting schedules for M&A contracts. These supporting schedules may disclose specific tax positions or limits to the indemnification which could significantly impact indemnification coverage. Third, M&A parties may obtain or provide third-party insurance instead of offering indemnification. By providing insurance, some contracts may indicate no indemnification is present, but the acquirer may be protected through insurance. However, per discussions with insurance providers, representations and warranties insurance is often provided in addition to indemnification clauses and insurance for specific tax positions is rarely present.

REFERENCES

Abernathy, J., Beyer, B., Gross, A. and E. Rapley. (2017). Income statement reporting discretion allowed by FIN 48: interest and penalty expense classification. *The Journal of the American Taxation Association* 39(1), 45-66.

Blouin, J. and L. Robinson. (2014). Insights from academic participation in the FAF's initial PIR: The PIR of FIN 48. *Accounting Horizons*, 479-500.

Blouin, J., Gleason, C., Mills, L. and S. Sikes. (2010). Pre-empting disclosure? Firms' decisions prior to FIN No. 48. *The Accounting Review* 85(3), 791-815.

Bozanic, Z., Hoopes, J., Thornock, J. and B. Williams. (2017). IRS attention. *Journal of Accounting Research* 55(1), 79-114.

Cazier, R., Rego, S., Tian, X. and R. Wilson. (2015). The impact of increased disclosure requirements and the standardization of accounting practices on earnings management through the reserve for income taxes. *Review of Accounting Studies* 20, 436-469.

Ciconte, W., Donohoe, M., Lisowsky, P. and M. Mayberry. (2016). Predictable uncertainty: the relation between unrecognized tax benefits and future income tax cash outflows. Working Paper.

De Simone, L., Robinson, J. and B. Stomberg. (2014). Distilling the reserve for uncertain tax positions: the revealing case of black liquor. *Review of Accounting Studies* 19, 456-472.

Dhaliwal, D., Gleason, C. and L. Mills. (2004). Last-chance earnings management: using the tax expense to meet analysts' forecasts. *Contemporary Accounting Research* 21(2), 431-459.

Financial Accounting Foundation. (2012). Post-implementation review report on FASB Interpretation No. 48, accounting for uncertainty in income taxes. Norwalk.

Gleason, C. and L. Mills. (2002). Materiality and contingent tax liability reporting. *The Accounting Review* 77(2), 317-342.

Gleason, C., Mills, L. and M. Nessa. (2018). Does FIN 48 improve firms' estimates of tax reserves? *Contemporary Accounting Review*.

Guenther, D., Matsunaga, S. and B. Williams. (2017). Is tax avoidance related to firm risk? *The Accounting Review*, 92(1), 115-136.

Gupta, S., Laux, R. and D. Lynch. (2016). Do firms use tax reserves to meet analysts' forecasts? Evidence from the pre- and post-FIN 48 periods. *Contemporary Accounting Research* 33(3), 1044-1074.

Hanlon, M. and S. Heitzman. (2010). A review of tax research. *Journal of Accounting and Economics* 50, 127-178.

Hanlon, M., Maydew, E. and D. Saavedra. (2018). The taxman cometh: does tax uncertainty affect corporate cash holdings? *Review of Accounting Studies*.

Internal Revenue Service. (2018, August 9). 2018 Instructions for Schedule UTP (Form 1120). Department of the Treasury.

Karlinsky, S. and H. Burton. (2011). Tax professionals' perception of large and mid-size business tax law complexity. Working Paper.

Logue, K. D. (2005). Tax law uncertainty and the role of tax insurance. *Virginia Tax Review* 25, 339.

Lisowsky, P., Robinson, L. and A. Schmidt. (2013). Do publicly disclosed tax reserves tell us about privately disclosed tax shelter activity? *Journal of Accounting Research* 51(3), 583-629.

Nesbitt, W. (2014). Unrecognized tax benefits: disentangling the effects of tax aggressiveness and financial reporting discretion. Doctoral Dissertation: University of Georgia.

Rego, S. and R. Wilson. (2012). Equity risk incentives and corporate tax aggressiveness. *Journal of Accounting Research* 50, 775-809.

Robinson, L. and A. Schmidt. (2013). Firm and investor responses to uncertain benefit disclosure requirements. *Journal of American Taxation Association* 35(2), 85-120.

Robinson, L., Stomberg, B. and E. Towery. (2016). One size does not fit all: how the uniform rules of FIN 48 affect the relevance of income tax accounting. *The Accounting Review* 91(4), 1195-1217.

Rosen, P., and Blitz, G. (2017). Trends and features of transactional liability insurance. *ACCEC Insurance Law Symposium.* Ann Arbor: American College of Coverage and Extracontractual Counsel.

Towery, E. (2017). Unintended consequences of linking tax return disclosures to financial reporting for income taxes: evidence from schedule UTP. *The Accounting Review* 92(5), 201-226.

Wolfe, R. (2011). Tax indemnity insurance: a valuable and evolving tool for managing tax risks. In L. Freeman, The Corporate Tax Practice Series (2011 Edition), 445 1-72. PLI.

Table 1: Sample Selection

	Firms	Observations
Total public company observations with more than $1,000,000 in total assets from 2008 thru 2013	10,954	46,447
Less observations from REITs and foreign filers	(3,710)	(15,205)
Less observations with negative total assets or sales	(3)	(25)
Less observations without all model variables	(5,004)	(22,650)
Full Sample with model variables	***2,237***	***8,567***
Less observations without current-year M&As	(1,172)	(5,937)
Less observations with multiple current-year M&As	(219)	(1,310)
Potential Contract Pool	***846***	***1,320***
Less observations without filed M&A contracts	(520)	(945)
Less observations without necessary contract detail	(19)	(20)
Final Contract Sample	***307***	***355***

Table 2: Contract Indemnification Composition

This table presents the indemnification characteristics of hand-collected M&A contracts.

Panel A:	Yes	No	Total Contracts	% Yes
Indemnification	282	73	355	79.43 %
Escrow	162	120	282	57.45 %

Panel B: Type	Indemnification	No Indemnification	Total Contracts	% with Indemnification
Merger	64	57	121	52.89 %
Asset Purchase	97	8	105	92.38 %
Interest Purchase	121	8	129	93.80 %
	282	73	355	79.43 %

Panel C: Consideration (in Millions)				
$0 < \$ < 100$	164	21	185	88.65 %
$100 \leq \$ < 250$	58	10	68	85.29 %
$250 \leq \$ < 500$	29	7	36	80.56 %
$500 \leq \$ < 1{,}000$	18	13	31	58.06 %
$1{,}000 \leq \$$	13	22	35	37.14 %
	282	73	355	79.43 %

Panel D: Target Status				
Publicly-Held	0	54	54	0.00 %
Subsidiary	131	8	139	94.24 %
Privately-Held	145	10	155	93.55 %
Joint Venture	6	1	7	85.71 %
	282	73	355	79.43 %

Table 2: Contract Indemnification Composition (Cont.)

Panel E: Fama-French 48 Industry	Indemnification	No Indemnification	Total Contracts	% with Indemnification
Business Services	36	14	50	72.00 %
Electronic Equipment	27	9	36	75.00 %
Computers	16	3	19	84.21 %
Medical Equipment	14	3	17	82.35 %
Retail	11	6	17	64.71 %
Pharmaceutical Products	7	9	16	43.75 %
Wholesale	16	0	16	100.00 %
Trading	13	1	14	92.86 %
Measuring and Control Equip.	12	1	13	92.31 %
Communication	10	2	12	83.33 %
Automobiles and Trucks	9	1	10	90.00 %
Business Supplies	8	2	10	80.00 %
Machinery	10	0	10	100.00 %
Chemicals	6	3	9	66.67 %
Steel Works	9	0	9	100.00 %
Consumer Goods	6	1	7	85.71 %
Electrical Equipment	7	0	7	100.00 %
Entertainment	7	0	7	100.00 %
Petroleum and Natural Gas	4	3	7	57.14 %
Food Products	6	0	6	100.00 %
Apparel	5	0	5	100.00 %
Construction Materials	5	0	5	100.00 %
Healthcare	4	1	5	80.00 %
Other	2	3	5	40.00 %
Restaurants, Hotels, Motels	5	0	5	100.00 %
Transportation	4	1	5	80.00 %
Construction	4	0	4	100.00 %
Personal Services	2	2	4	50.00 %
Rubber and Plastic Products	4	0	4	100.00 %
Textiles	2	2	4	50.00 %
Banking	3	0	3	100.00 %
Insurance	1	2	3	33.33 %
Aircraft	1	1	2	50.00 %
Printing and Publishing	1	1	2	50.00 %
Recreation	2	0	2	100.00 %
Shipbuilding, Railroad Equip.	2	0	2	100.00 %
Fabricated Products	1	0	1	100.00 %
Tobacco Products	0	1	1	0.00 %
Utilities	0	1	1	0.00 %
	282	73	355	79.43 %

Table 3: Descriptive Statistics

This table presents descriptive statistics on the full contract sample, the subsample of contracts without indemnification, and the subsample of contracts with indemnification in Panels A, B, and C, respectively. Bolded means and medians indicate significant differences at the 1% level between Panels B and C. All continuous variables are winsorized at the 1% and 99% levels. All variables are defined in Appendix A.

Variable	N	Mean	Standard Deviation	P(25)	Median	P(75)
Panel A: Full Contract Sample						
Total Assets (in Billions)	355	**2.5240**	4.9720	0.2945	**0.7641**	2.0340
Pretax Return on Assets	355	0.0430	0.1590	-0.0131	0.0647	0.1250
Leverage Ratio	355	**0.2760**	0.3000	0.0249	**0.1810**	0.4170
Book to Market Ratio	355	0.6410	0.6140	0.3280	0.5370	0.7980
Multinational	355	0.4990	0.5010	0.0000	0.0000	1.0000
Unlogged FUT_TXPD_{t+4}	355	0.0854	0.0939	0.0191	0.0518	0.1230
FUT_TXPD_{t+4}	355	-3.2360	1.5570	-3.9600	-2.9610	-2.0950
UTB_t	355	**0.0131**	0.0201	0.0017	0.0057	0.0145
$INDEMN_t$	355	0.7943	0.4050	1.0000	1.0000	1.0000
$CONS_t$	355	**0.1640**	0.1370	0.0664	**0.1190**	0.2260
$NOLCF_t$	355	**0.2610**	0.7170	0.0000	0.0155	0.1910
$TXPD_t$	355	0.0183	0.0224	0.0020	0.0102	0.0296
Δ_TXPD_t	355	0.0004	0.0178	-0.0047	0.0005	0.0073
Δ_PTBI_t	355	-0.0082	0.1290	-0.0351	0.0008	0.0278
DT_A_t	355	0.0214	0.0419	0.0000	0.0002	0.0231
DT_L_t	355	**-0.0185**	0.0335	-0.0227	0.0000	0.0000

Table 3: Descriptive Statistics (Cont.)

Variable	N	Mean	Standard Deviation	P(25)	Median	P(75)
Panel B: No Indemnification Subsample ($INDEMN_t = 0$)						
Total Assets (in Billions)	73	**4.8640**	7.2240	0.5003	**1.5450**	4.8750
Pretax Return on Assets	73	0.0287	0.1760	-0.0200	0.0587	0.1090
Leverage Ratio	73	**0.4250**	0.3880	0.1380	**0.3290**	0.6740
Book to Market Ratio	73	0.5390	0.3590	0.2850	0.5010	0.7350
Multinational	73	0.4520	0.5010	0.0000	0.0000	1.0000
Unlogged FUT_TXPD_{t+4}	73	0.0683	0.0788	0.0145	0.0388	0.1000
FUT_TXPD_{t+4}	73	-3.5990	1.7560	-4.2320	-3.2500	-2.3020
UTB_t	73	**0.0184**	0.0255	0.0020	0.0080	0.0232
$CONS_t$	73	**0.2590**	0.1640	0.1170	**0.2470**	0.3790
$NOLCF_t$	73	**0.4710**	1.1570	0.0000	0.0591	0.2500
$TXPD_t$	73	0.0165	0.0208	0.0020	0.0093	0.0259
Δ_TXPD_t	73	0.0016	0.0177	-0.0021	0.0004	0.0060
Δ_PTBI_t	73	-0.0164	0.1260	-0.0441	-0.0062	0.0182
DT_A_t	73	0.0205	0.0438	0.0000	0.0000	0.0145
DT_L_t	73	**-0.0270**	0.0411	-0.0454	-0.0042	0.0000
Panel C: Indemnification Subsample ($INDEMN_t = 1$)						
Total Assets (in Billions)	282	**1.9180**	3.9980	0.2734	**0.6271**	1.7340
Pretax Return on Assets	282	0.0467	0.1550	-0.0079	0.0687	0.1260
Leverage Ratio	282	**0.2370**	0.2600	0.0190	**0.1540**	0.3630
Book to Market Ratio	282	0.6680	0.6620	0.3390	0.5460	0.8110
Multinational	282	0.5110	0.5010	0.0000	1.0000	1.0000
Unlogged FUT_TXPD_{t+4}	282	0.0898	0.0971	0.0207	0.0565	0.1310
FUT_TXPD_{t+4}	282	-3.1430	1.4900	-3.8790	-2.8740	-2.0350
UTB_t	282	**0.0117**	0.0182	0.0017	0.0054	0.0138
$CONS_t$	282	**0.1400**	0.1180	0.0572	**0.1050**	0.1770
$NOLCF_t$	282	**0.2060**	0.5390	0.0000	0.0129	0.1510
$TXPD_t$	282	0.0187	0.0228	0.0021	0.0109	0.0297
Δ_TXPD_t	282	0.0001	0.0179	-0.0049	0.0006	0.0073
Δ_PTBI_t	282	-0.0061	0.1300	-0.0332	0.0024	0.0291
DT_A_t	282	0.0216	0.0414	0.0000	0.0017	0.0244
DT_L_t	282	**-0.0163**	0.0309	-0.0191	0.0000	0.0000

Table 4: Correlations

This table presents Pearson's (below diagonal) and Spearman's (above diagonal) correlation coefficients for the sample (N=355, 73, and 282 in Panels A, B, and C respectively). Bold indicates significance at the 1% level. All continuous variables are winsorized at the 1% and 99% levels. All variables are defined in Appendix A.

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Panel A: Full Contract Sample										
(1) FUT_TXPD_{t+4}		-0.0627	0.1007	-0.0301	**-0.4316**	**0.6756**	0.1324	**0.2146**	0.0633	-0.0476
(2) UTB_t	**-0.2022**		-0.1098	0.0963	**0.1898**	-0.0076	0.0484	0.0035	**0.1387**	**0.1802**
(3) $INDEMN_t$	0.1186	-0.1347		**-0.3238**	-0.0874	0.0468	-0.0212	0.0645	0.0767	0.1041
(4) $CONS_t$	-0.0810	0.0893	**-0.3523**		0.0520	-0.0114	-0.0217	**-0.1469**	-0.0719	**-0.1455**
(5) $NOLCF_t$	**-0.4285**	**0.4890**	**-0.1496**	0.0574		**-0.3828**	-0.0102	-0.0856	0.0759	0.1138
(6) $TXPD_t$	**0.5545**	-0.1320	0.0410	-0.0833	**-0.2153**		**0.3381**	**0.1480**	0.0775	-0.0218
(7) Δ_TXPD_t	0.0863	-0.0172	-0.0335	-0.0526	-0.0419	**0.3340**		**0.3429**	0.0261	0.0233
(8) Δ_PTBI_t	0.0939	0.0256	0.0322	-0.0782	0.0273	0.0472	**0.1793**		-0.0810	-0.0688
(9) DT_A_t	-0.0526	0.0907	0.0110	-0.0426	0.0890	-0.0562	-0.0292	0.0613		**0.7855**
(10) DT_L_t	-0.0502	**0.1683**	0.1298	-0.1103	0.1054	0.0316	-0.0134	-0.0528	**0.2830**	
Panel B: No Indemnification Subsample ($INDEMN_t = 0$)										
(1) FUT_TXPD_{t+4}		-0.1501	-0.1434	**-0.4834**	**0.6911**	0.1386	0.1814	0.0949	-0.1426	
(2) UTB_t	**-0.3492**		0.2636	**0.3501**	-0.0888	-0.1492	-0.1885	0.2290	0.2538	
(3) $CONS_t$	-0.1190	0.1316		0.1698	-0.0746	-0.1557	-0.1469	-0.1187	-0.0881	
(4) $NOLCF_t$	**-0.6416**	**0.6258**	0.0224		**-0.3756**	-0.1462	-0.2657	0.0036	0.1094	
(5) $TXPD_t$	**0.5416**	-0.2808	-0.1948	-0.2579		**0.5575**	0.2677	0.1788	-0.0084	
(6) Δ_TXPD_t	0.2392	-0.2266	-0.1613	-0.1334	**0.6138**		**0.4011**	0.0498	-0.0562	
(7) Δ_PTBI_t	0.1084	0.1114	-0.0303	0.1194	0.1723	**0.3044**		0.0013	-0.0679	
(8) DT_A_t	-0.0478	**0.3057**	-0.0774	0.1089	0.0649	0.0505	0.2401		**0.7628**	
(9) DT_L_t	-0.2243	0.2608	-0.0296	0.1854	-0.0505	-0.1487	-0.1119	**0.3117**		

Table 4: Correlations (Cont.)

This table presents Pearson's (below diagonal) and Spearman's (above diagonal) correlation coefficients for the sample (N=355, 73, and 282 in Panels A, B, and C respectively). Bold indicates significance at the 1% level. All continuous variables are winsorized at the 1% and 99% levels. All variables are defined in Appendix A.

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel C: Indemnification Subsample ($INDEMN_t$ = 1)									
(1) FUT_TXPD_{t+4}		-0.0347	0.0571	**-0.4122**	**0.6750**	0.1348	**0.2231**	0.0454	-0.0413
(2) UTB_t	-0.1227		0.0108	0.1311	0.0099	0.0917	0.0641	0.1356	**0.1804**
(3) $CONS_t$	-0.0100	0.0020		-0.0278	0.0341	0.0005	-0.1266	-0.0332	-0.1338
(4) $NOLCF_t$	**-0.3036**	**0.3845**	-0.0081		**-0.3866**	0.0211	-0.0359	0.1078	0.1384
(5) $TXPD_t$	**0.5615**	-0.0808	-0.0358	**-0.2151**		**0.2810**	0.1143	0.0442	-0.0398
(6) Δ_TXPD_t	0.0467	0.0505	-0.0371	-0.0056	**0.2717**		**0.3296**	0.0200	0.0447
(7) Δ_PTBI_t	0.0861	0.0027	-0.0869	-0.0100	0.0174	0.1501		-0.1156	-0.0862
(8) DT_A_t	-0.0564	0.0136	-0.0282	0.0903	-0.0867	-0.0501	0.0142		**0.7877**
(9) DT_L_t	-0.0033	**0.1549**	-0.0887	0.0910	0.0509	0.0381	-0.0403	**0.2761**	

Table 5: Interaction Model of UTBs' Association with Future Tax Cash Outflows

This table presents the results of utilizing interaction models to test differences between contracts without indemnification and with indemnification. Column 1 presents the results of Model (1) for all firms in which contracts were obtained regardless of increases to UTBs, Column 2 presents the results of Model (1) for firms which report increases to UTBs due to M&As and prior tax positions, and Column 3 presents the results of Model (1) for firms which report increases to UTBs due to M&As and prior tax positions but omits asset purchase contracts. The dependent variable in all Panels is FUT_TXPD_{t+4}. All variables are defined in the Appendix A and all continuous variables are winsorized at the 1% and 99% levels. Cluster (company) robust t-statistics are presented in parentheses, f-statistics are presented in brackets. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (based on one-tailed tests when a direction is predicted, two-tailed otherwise).

VARIABLES	(+,-)	(1) Full FUT_TXPD_{t+4}	(2) Increases in UTBs FUT_TXPD_{t+4}	(3) Increases in UTBs - No Asset Purchases FUT_TXPD_{t+4}
$INDEMN_t$ (β_1)	?	0.2756	0.3566	0.3999
		(0.579)	(0.868)	(0.793)
UTB_t (β_2)	+	***15.5620****	***22.7490****	***24.8950*****
		(2.130)	***(2.313)***	***(2.369)***
$INDEMN_t$* UTB_t (β_3)	-	***-15.6363****	***-20.5951****	***-28.1494*****
		(-1.463)	***(-1.962)***	***(-2.333)***
$CONS_t$ (β_4)	-	-0.6838	-0.4384	-0.3951
		(-1.057)	(-0.655)	(-0.546)
$INDEMN_t$* $CONS_t$ (β_5)	?	0.7448	0.4238	0.1479
		(0.773)	(0.401)	(0.114)
$NOLCF_t$ (β_6)	-	-0.9984***	-1.0011***	-1.1863***
		(-9.318)	(-5.067)	(-4.954)
$INDEMN_t$* $NOLCF_t$ (β_7)	+	0.4917**	0.3653	0.7477**
		(2.209)	(1.185)	(2.273)
$TXPD_t$ (β_8)	+	42.9616***	47.4030***	47.4825***
		(5.766)	(6.601)	(5.919)
$INDEMN_t$* $TXPD_t$ (β_9)	?	-6.3073	-16.0443*	-13.7414
		(-0.753)	(-1.819)	(-1.309)
Δ_TXPD_t (β_{10})	-	-18.5973**	-37.2747***	-34.4345***
		(-2.138)	(-3.397)	(-2.690)
$INDEMN_t$* Δ_TXPD_t (β_{11})	?	7.9476	27.5451**	16.6773
		(0.781)	(2.188)	(1.196)
Δ_PTBI_t (β_{12})	+	1.9637**	3.4269*	2.0740
		(2.113)	(1.571)	(0.883)
$INDEMN_t$* Δ_PTBI_t (β_{13})	?	-0.8667	-2.5867	-0.9247
		(-0.757)	(-1.165)	(-0.365)
DT_A_t (β_{14})	-	-2.1473	-3.1887	-4.0234
		(-0.726)	(-0.748)	(-0.926)
$INDEMN_t$* DT_A_t (β_{15})	+	2.4738	4.4079	5.5545
		(0.786)	(0.929)	(1.127)
DT_L_t (β_{16})	-	-6.1392**	-4.3913**	-4.5463**
		(-2.062)	(-1.975)	(-2.021)
$INDEMN_t$* DT_L_t (β_{17})	+	6.2079*	2.3913	1.7568
		(1.586)	(0.632)	(0.427)
$CONSTANT_t$ (β_0)	?	-3.9853***	-3.7921***	-4.0074***
		(-7.573)	(-8.885)	(-7.968)
$\beta_2 + \beta_3$		***(-0.0743)***	***2.1539***	***(-3.2544)***
		[0.00]	***[0.31]***	***[0.28]***
Observations		355	223	168
Adjusted R-squared		0.413	0.361	0.334
Year Fixed Effects		YES	YES	YES
Industry Fixed Effects		NO	NO	NO

Table 6: UTBs' Association with Future Tax Cash Outflows when using Various Identifiers to Proxy for Indemnification

This table presents the results of utilizing M&As, M&As which report increases to prior UTBs, non-public targets, M&A deals with consideration less than one billion, and non-Merger M&A deals as proxies for tax indemnification. The dependent variable in all Panels is FUT_TXPD_{t+4}. All variables are defined in the Appendix A and all continuous variables are winsorized at the 1% and 99% levels by year. Cluster (company) robust t-statistics are presented in parentheses, f-statistics are presented in brackets. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (based on one-tailed tests when a direction is predicted, two-tailed otherwise).

VARIABLES	(+, -)	(1) M&As FUT_TXPD_{t+4}	(2) M&As with Increases FUT_TXPD_{t+4}	(3) Non-Public Targets FUT_TXPD_{t+4}	(4) Consideration < $1 Billion FUT_TXPD_{t+4}	(5) Non-Merger M&As FUT_TXPD_{t+4}
$PROXY_t$ (β_1)	?	0.2612***	0.0689	0.1956**	0.1148	0.1248
		(3.326)	(0.765)	(2.326)	(1.041)	(1.347)
UTB_t (β_2)	+	***3.7675****	***2.5222****	***3.4911****	***3.6435****	***3.2113****
		(2.268)	***(1.432)***	***(2.078)***	***(2.248)***	***(1.925)***
$PROXY_t$* UTB_t (β_3)	-	***-1.5961***	***-3.8432****	***0.1703***	***-1.0336***	***1.8058***
		(-0.599)	***(-1.467)***	***(0.053)***	***(-0.285)***	***(0.522)***
$\beta_2 + \beta_3$		***2.1714***	***-1.3210***	***3.6614***	***2.6099***	***5.0171***
		[0.87]	***[0.34]***	***[1.49]***	***[0.57]***	***[2.37]***
Controls		YES	YES	YES	YES	YES
Interactions		YES	YES	YES	YES	YES
Observations		8,567	4,672	7,257	7,257	7,257
Adjusted R-squared		0.432	0.448	0.426	0.426	0.425
Year Fixed Effects		YES	YES	YES	YES	YES
Industry Fixed Effects		YES	YES	YES	YES	YES

Table 7: GAAP and Cash ETR Test of Differences

This table presents future ETRs for contracts without and with indemnification and tests of differences between those two subsamples. The variables of interest are $GETR_{t+4}$ and $CETR_{t+4}$, in all Panels. Means and medians are presented for observations without indemnification (columns titled "Without") and observations with indemnification (columns titled "With"). T-statistics and z-statistics are presented for tests of differences in means and means between firms with and without indemnification. All continuous variables are winsorized at the 1% and 99% levels and are defined in Appendix A. * and ** indicate significance at the 0.10 and 0.05 levels.

Panel A: Full contract sample

		Means		Medians		Test Statistics	
Variables	N	Without	With	Without	With	t-Stat	z-Stat
$GETR_{t+4}$	355	0.1581	0.2195	0.2646	0.2993	0.7712	0.3300
$CETR_{t+4}$	355	0.1061	0.2279	0.1713	0.2419	1.8164**	1.6780*
Test Statistics		0.6911	0.2136				

Panel B: UTB increases due to M&As and prior tax positions

		Means		Medians		Test Statistics	
Variables	N	Without	With	Without	With	t-Stat	z-Stat
$GETR_{t+4}$	223	0.3303	0.2293	0.2794	0.2841	1.0663	0.7980
$CETR_{t+4}$	223	0.1649	0.2282	0.2324	0.2623	0.7199	0.7500
Test Statistics		2.2564**	0.0195				

Panel C: UTB increases due to M&As and prior tax positions, Asset Purchase Contracts Omitted

		Means		Medians		Test Statistics	
Variables	N	Without	With	Without	With	t-Stat	z-Stat
$GETR_{t+4}$	168	0.3380	0.2405	0.2780	0.2838	1.0465	0.8290
$CETR_{t+4}$	168	0.1735	0.2358	0.2356	0.2501	0.6623	0.2060
Test Statistics		2.1105**	0.0711				

Panel D: UTB increases due to M&As

		Means		Medians		Test Statistics	
Variables	N	Without	With	Without	With	t-Stat	z-Stat
$GETR_{t+4}$	51	0.3159	0.1412	0.2933	0.2368	1.6938*	1.5830
$CETR_{t+4}$	51	0.2172	0.3270	0.2690	0.2695	0.8608	0.3200
Test Statistics		1.7566**	1.4112*				

Panel E: No M&As

Variables	N	Means	Medians
$GETR_{t+4}$	5,937	0.2024	0.2881
$CETR_{t+4}$	5,937	0.2043	0.2200
Test Statistic		0.2525	

Appendix A: Variable Descriptions

Variable	Definition
CETR	The sum of future tax cash outflows (TXPD) over the next four years to the sum of net pretax income (PI – SPI) over the next four years.
CONS	The ratio of merger consideration to ending total assets in year t (AT).
DT_A	If net deferred taxes (TXNDB) is greater than zero, the ratio of net deferred taxes to ending total assets in year t (AT), zero otherwise.
DT_L	If net deferred taxes (TXNDB) is less than zero, the ratio of net deferred taxes to ending total assets in year t (AT), zero otherwise.
INDEMN	Indicator variable equal to one if the observation obtained indemnification through M&A contract, zero otherwise.
FUT_TXPD	The log of the sum of future tax cash outflows (TXPD) over the next four years to ending total assets in year t (AT).
GETR	The sum of future tax expense (TXT) over the next four years to the sum of net pretax income (PI – SPI) over the next four years.
NOLCF	The ratio of net operating loss carryforwards (NOLCF) to beginning total assets (AT) in year t.
Δ*_PTBI*	The difference in pretax book income in year t and pretax book income in year t-1, scaled by ending total assets in year t (AT).
UTB	The ratio of reported unrecognized tax benefits (TXTUBEND) to ending total assets (AT) in year t.
TXPD	The ratio of taxes paid (TXPD) to ending total assets in year t (AT).
Δ*_TXPD*	The difference between taxes paid in year t and taxes paid in year t-1, scaled by ending total assets in year t (AT).

Appendix B: Discussion of M&A Contracts and Excerpts from M&A Contracts on Indemnification

DISCUSSION OF INDEMNIFICATION LANGUAGE

Indemnification and tax matters sections of obtained M&A contracts were examined carefully to identify tax indemnification clauses. A thorough search of these contracts revealed that tax indemnification is described in various ways. For instance, refer to the language below contained within the stock purchase agreement between Forward Air Corporation, TQI Holdings, Inc., and various sellers. The sellers disclose within the tax matters section that "Each Entity has filed … all … material Tax Returns ... All such Tax Returns were correct and complete in all material respects. All Taxes owed by the Entities … have been paid". In other words, the seller represents that all taxes associated with the target were done properly and paid. Later in the tax matters section, the sellers agree that "the Sellers shall … indemnify the Entities and Buyer … against, and protect, save and hold harmless each Indemnified Taxpayer from, any and all [Losses] resulting from: (i) except to the extent reflected in the calculation of Closing Date Working Capital, any Taxes of any Entity allocable to any period ending on or prior to the Closing Date … (iv) any misrepresentation or breach of any representation, warranty or obligation set forth in this [section]". Simply put, if the sellers misrepresented something to the buyer and it results in a loss, then the sellers would make the buyer whole again.

Comparing the above stock purchase agreement language to the asset purchase agreement language between Depomed and Xanodyne Pharmaceuticals, little overlap exists between the languages used in these two contracts. However, both contracts provide tax indemnification to the buyer. Furthermore, the asset purchase agreement specifically addresses taxes associated with pre-closing periods (very straightforward language) and excluded liabilities (ambiguous language). Further investigation of this language shows that excluded liabilities in the context of this contract include all tax liabilities associated with pre-closing periods. The separation of this language is common among asset purchase contracts and requires that external users determine what the language is referring to.

Of the 355 contracts, 215 included separate discussions of indemnification which specifically address taxes. Per interviews with key M&A consultants, the indemnification of tax representations normally protects the buyer against all tax losses associated with past positions including complex issues such as transfer pricing. Therefore, I concentrate on the indemnification of tax representations instead of specific tax indemnification clauses.

Contracts which do not provide indemnification can be easy or very difficult to identify. In an easy case, the contract will specify that any representations about the target will not survive the closing. For instance, refer to the agreement and plan of merger below between Visa and Cybersource. Cybersource states within the "General Provisions" section that "The representations and warranties of the Company, Parent and Merger Sub contained in this Agreement… shall terminate at the Effective Time [of the M&A]". In other words, any misrepresentation of the target which results in a loss for Visa will not be reimbursed by Cybersource, unless Cybersource was fraudulent

in their representations or a separate agreement exists within the contract which bypasses this language. When this language is not present, an external party would have to review a significant portion of the contract to determine whether indemnification is present. See below for contract excerpts.

EXAMPLES OF INDEMNIFICATION LANGUAGE

Stock Purchase Agreement between Forward Air Corporation, TQI Holdings, Inc., and the "Sellers" named herein (Dated March 4, 2013)

Tax Matters:

8.1 Representations and Obligations Regarding Taxes. The Company hereby represents and warrants to and agree with Buyer that, except as set forth on Schedule 8.1 hereto: (a) Each Entity has filed all federal income and all other material Tax Returns that it has been required to file. All such Tax Returns were correct and complete in all material respects. All Taxes owed by the Entities (whether or not shown on any Tax Return and whether or not any Tax Return was required) have been paid. Since March 7, 2008, no claim has been made by a taxing authority in a jurisdiction where any Entity does not file Tax Returns that such Entity is subject to taxation by that jurisdiction.

8.2 Indemnification for Taxes. (a) From and after the Closing, the Sellers shall severally (in accordance with each Seller's Proportionate Share) indemnify the Entities and Buyer (each herein sometimes referred to as an "Indemnified Taxpayer") against, and protect, save and hold harmless each Indemnified Taxpayer from, any and all out-of-pocket damages, deficiencies, losses and reasonable expenses, including, without limitation, reasonable attorneys', accountants' and experts' fees and disbursements (all herein referred to as "Losses") resulting from: (i) except to the extent reflected in the calculation of Closing Date Working Capital, any Taxes of any Entity allocable to any period ending on or prior to the Closing Date or, as provided in Section 8.3(c) hereof, allocable to any period that begins before and ends after the Closing Date; (ii) any Tax of any Person other than an Entity for periods ending on or before the Closing Date imposed upon any Entity as a result of the Entity being included prior to the Closing Date in a combined, consolidated or unitary Tax group under Treasury Regulation Section 1.1502-6 (or any similar provision of the applicable law of any Governmental Authority) or, as a transferee or successor, by contract or otherwise, except for a Contract the principal purpose of which is not to indemnify or pay the Taxes of another person; (iii) the failure to pay state income Taxes or state franchise Taxes in any state other than the State of Michigan prior to the Closing Date but not thereafter (the "Potential State Tax Matters"); (iv) any misrepresentation or breach of any representation, warranty or obligation set forth in this Article VIII; or (v) any real property transfer, recordation or similar tax imposed by the State of Michigan with reference to real property owned by QSX.

Asset Purchase Agreement between Depomed, Inc. and Xanodyne Pharmaceuticals, Inc. (Dated June 21, 2012):

Representations and Warranties of the Seller:

2.3 Taxes.

(a) The Seller has timely filed all material Tax Returns that it has been required to file, and all such Tax Returns were true, correct and complete in all material respects. The Seller has paid on a timely basis all Taxes that have been due from and payable by the Seller. For purposes of this Agreement, (i) "Taxes" means (A) all taxes, charges, fees, duties, levies or other similar assessments or liabilities in the nature of a tax, including income, excess profits, gross receipts, net proceeds, alternative or add-on minimum, ad valorem, premium, value-added, excise, real property, personal property (tangible and intangible), inventory, stamp, capital stock, sales, use, service, transfer, withholding, employment, social security, unemployment, disability, payroll, occupational, severance, estimated and franchise taxes imposed by any Taxing Authority and (B) any interest, fines, penalties, assessments or additions to tax resulting from, attributable to or incurred in connection with any tax described in clause (A) or any contest or dispute thereof, (ii) "Tax Returns" means all reports, returns, declarations, statements or other information required to be supplied to any Taxing Authority in connection with Taxes (including any attachments thereto or amendments thereof), (iii) "Taxing Authority" means any U.S. or non-U.S. federal, state, municipal or local government, court, tribunal, agency, commission, regulatory authority or instrumentality or any other entity or person exercising executive, legislative, judicial, regulatory or administrative authority to impose, levy or assess any Tax, and (iv) "Tax Law" means any U.S. or non-U.S. federal, state, provincial, municipal or local law, statute, ordinance, treaty, common law, rule, regulation, standard, judgment, order, writ, injunction, decree, arbitration award, agency requirement, license or permit of any Taxing Authority. The Seller has complied in all material respects with all applicable Tax Laws relating to the filing of Tax Returns and the payment and withholding of Taxes, and all Taxes that the Seller has been required by Tax Law to withhold or collect have been duly withheld or collected and, to the full extent required, have been properly paid to the appropriate Taxing Authorities.

Indemnification:

5.1 Indemnification by the Seller. Subject to the terms and conditions of this Article V, from and after the Closing, the Seller shall indemnify, defend and hold harmless the Buyer and the Buyer's directors, officers and employees from and against any and all losses, damages, obligations, liabilities, claims, fines, fees, penalties, interest, awards, judgments and claims of any kind, including reasonable attorneys' and consultants' fees and expenses and other reasonable legal costs and expenses incurred in prosecution, investigation, remediation, defense or settlement (collectively, "Damages") resulting from, based on, arising out of, in connection with or constituting:

(a) the inaccuracy or any breach of any of the representations or warranties of the Seller contained in this Agreement or any agreement or certificate required to be delivered by the Seller pursuant to this Agreement;

(b) any breach or failure to perform by the Seller of any covenant or agreement contained in this Agreement;

(c) any non-compliance with applicable bulk sales laws;

(d) any claims brought by employees, independent contractors or consultants of the Seller, including, but not limited to, those who were or are terminated prior to or as of the Closing Date; (e) Transaction Fees incurred by the Seller;

(f) any Excluded Liabilities;

(g) any Excluded Assets; or

(h) one half (1/2) of any Damages incurred by the Buyer in connection with the matters set forth in Schedules 2.4(a), 2.4(d) and 2.4(e) of the Seller Disclosure Schedule.

EXAMPLE OF NO INDEMNIFICATION LANGUAGE

Agreement and Plan of Merger between Visa, Inc. and Cybersource, Corp. (Dated April 20, 2010):

Representations and Warranties of the Company:

2.6 Taxes.

(b) Taxes, Tax Returns and Audits.

(i) The Company and each of its Subsidiaries have (A) duly and timely filed or caused to be filed all Tax Returns and such Tax Returns are true, correct, and complete in all material respects, (B) duly and timely paid or withheld (and timely paid over any withheld amounts to the appropriate Governmental Entity) all Taxes required to be paid or withheld whether or not shown as due on any Tax Return, and (C) established reserves in accordance with GAAP that are adequate for the payment of all Taxes not yet due and payable with respect to the assets and operations of the Company and each Subsidiary through the date of this Agreement.

General Provisions:

8.1 Non-Survival of Representations and Warranties. The representations and warranties of the Company, Parent and Merger Sub contained in this Agreement, or any instrument delivered pursuant to this Agreement, shall terminate at the Effective Time, and only the covenants that by their terms survive the Effective Time and this Article VIII shall survive the Effective Time.

Appendix C: Illustrative Example of Accounting Under ASC 805 and Potential ETR Issues

ASC 805 addresses various aspects of business combinations, including how to record indemnified tax positions. Within the context of business combinations, indemnified tax positions are acquired contingent tax liabilities in which the seller has agreed to hold the acquirer harmless. ASC 805 requires mirror accounting for indemnified liabilities; specifically, ASC 805 states "the acquirer shall recognize an indemnification asset at the same time that it recognizes the indemnified item". For an illustrative example, consider the accounting for a $100,000,000 indemnified tax position under ASC 805. Firm A acquires Subsidiary T from Firm S. Prior to the acquisition, Subsidiary T maintains a $100,000,000 UTB for uncertain tax positions which are currently susceptible to authoritative challenges. To sweeten the deal, Firm S has agreed to indemnify Firm A for all taxes, interest and penalties associated with successful challenges to Subsidiary T's uncertain tax positions. Though Firm S is contractually responsible for the uncertain tax positions, Firm A is still required, under ASC 805, to reflect Subsidiary T's uncertain tax positions in its consolidated financial statements. Therefore, Firm A will account for the M&A as follows:

(1)	Other M&A Assets	$ ###,###,###	
	Tax Indemnification Asset	$ 100,000,000	
	UTB	$ 100,000,000	
	Other M&A Liabilities		$ ###,###,###
	Consideration Paid for M&A		$ ###,###,###

Though the recognition of these indemnified tax positions increases Firm A's assets and liabilities, Firm A will not experience any net effect to equity or income.

When the tax position is successfully challenged and a tax payment is due or when the statute of limitations expires for the tax position, the tax indemnification asset and UTB reserve associated with that position must be eliminated. Let us continue the example. Subsidiary T loses a challenge from a tax authority on the indemnified tax position. Firm A pays the settlement on behalf of Subsidiary T and submits a reimbursement request per the terms of the indemnification agreement with Firm S. Firm S approves the reimbursement request and submits the payment to Firm A. The entries are as follows:

(2)	UTB	$ 100,000,000	
	Cash		$ 100,000,000
(3)	Cash	$ 100,000,000	
	Tax Indemnification Asset		$ 100,000,000

These entries result in the removal of the asset and liability representing the indemnified tax position without affecting Firm A's equity or income.

It is also possible that the tax indemnification accounts may need to be adjusted without any actual cash flows due to the expiration of statutes of limitations associated with indemnified positions or due to specific provisions within the M&A contract. Unlike other possible indemnified liabilities, the adjustment of indemnified tax liabilities results in changes to both pre-tax income and tax expense. When tax statutes expire, ASC 740 standards coupled with SEC regulations result in the recognition of a tax benefit without the ability to offset the recognized tax benefit with the reversal of the tax indemnification asset. Therefore, the tax indemnification asset must be adjusted through a pre-tax account while the UTB must be adjusted through tax expense. Now, return to the earlier example and assume the position was never challenged. After three years, the statute of limitations expires on the uncertain tax position taken by Subsidiary T. In response, Firm A removes the tax indemnification asset and associated UTB from their financial records. Their entries are as follows:

(4)	UTB	$ 100,000,000	
	Tax Benefit		$ 100,000,000
(5)	Other Expense	$ 100,000,000	
	Tax Indemnification Asset		$ 100,000,000

These entries result in the removal of the asset and liability representing the indemnified tax position without affecting Firm A's equity or overall income.

However, the above accounting does influence pre-tax income and tax expense, creating a permanent book-tax difference and distorting GAAP and cash ETRs.[24] Assume that prior to removing the UTBs associated with the indemnified tax position, Firm A's consolidated financial statements reflected pretax book income of $2,500 million, GAAP tax expense of $525 million, and cash taxes paid of $525 million, which results in GAAP and cash ETRs of 21.00 percent. By removing the $100 million UTB reserve and the $100 million tax indemnification asset, Firm A's consolidated financial statements reflect GAAP tax expense of $425 million (decreased), cash outflows related to income tax of $525 million (unchanged) and pretax book income of $2,400 (decreased), which results in a GAAP ETR of 17.71 percent and a cash ETR of 21.88 percent. Therefore, the GAAP ETR is understated and the cash ETR is overstated.

[24] A similar difference is created if the firm has a settlement that is more or less than the booked UTB reserve. If the firm settled for more than the reserve and it was fully indemnified, the firm would record increases to the UTB reserve and a tax indemnification asset in the period in which it becomes evident that the reserve is not adequate per ASC 740-10-25-15. Per SEC regulations, mirror accounting is not allowed to adjust the reserve. Therefore, firms would record an increase to other income (to increase the indemnification asset) and tax expense (to record the higher settlement).