

Exempting Small Firms from Anti-fraud IRS Disclosures: Investor Perceptions

Norman Massel Jungeun "JP" Park K.C. Rakow*

Introduction

In the audit of corporate tax returns at the federal level, the IRS received over two million C corporation filings in tax year 2020 (IRS, 2021). In order to identify tax issues, including fraudulent tax shelters, in the filings of these corporate taxpayers, the IRS in 2004 promulgated Schedule M-3, *Net Income (Loss) Reconciliation for Corporations with Total Assets of \$10 Million or More.* Prior to Schedule M-3, the IRS utilized Schedule M-1, which is a far less detailed disclosure requirement that had been required since 1964.

During the 1990's, corporations began to redefine their internal tax departments as profit centers rather than cost centers, leading to an increased level of tax aggressiveness (Robinson, Sikes, and, Weaver, 2010; McGill and Outslay, 2004). Schedule M-1 required firms to reconcile their book income to taxable income, but the lack of detail often allowed the IRS to only ascertain that there was a large gap between the two measures of income, but little else. The widening "book-tax gap" of the 1990's is often explained as due to firms increasingly utilizing abusive tax shelters to aggressively avoid taxes. Because tax sheltering is an illegal means of avoiding taxation, our study of the audit tools that the IRS utilizes to identify aggressive tax positions contributes to academic accounting research centered on better understanding fraud and how the taxing authority can reduce fraud. The expectation of the IRS in requiring Schedule M-3 disclosure was that tax aggressiveness would be easier for the IRS to identify.

In 2010, the IRS then introduced Schedule UTP, *Uncertain Tax Position*.¹ When Schedule UTP was introduced by the IRS, the Service stated that it would likely "reduce the need for some of the information currently reported on the Schedule M-3" (IRS, 2010). Similar to Schedule M-3, the IRS implemented Schedule UTP in order to more easily understand the aggressive tax positions of firms, thereby aiding the IRS in their investigation of risky tax positions that in certain instances can be classified as fraudulent. In the years since these two filing requirements were introduced, the IRS has continued to signal their preference for Schedule UTP rather than Schedule M-3. For example, on May 10, 2013, the IRS announced that firms with assets between \$10 million and \$50 million were exempt from mandatory disclosure of Parts II and III of Schedule M-3 and that further changes to Schedule M-3 were being considered.² However, academic research by Abernathy, Davenport, and Rapley (2013), Honaker and Sharma (2017), and Howard and Massel (2019) suggests firms are able to circumvent Schedule UTP disclosure.

Furthermore, the Treasury Inspector General for Tax Administration (TIGTA) concluded in 2018, after a lengthy investigation, that Schedule UTP is not effective in identifying tax issues for the IRS to audit. In coming to their conclusion, field officers of the IRS that provided feedback to TIGTA indicated that the framework of Schedule UTP limited the ability of agents to reconcile the aggregate unrecognized tax benefit (UTB) disclosed on financials, to the specific positions listed on Schedule UTP. This inability stems from the financial statement UTB also containing uncertain tax positions pertaining to state and local tax positions, as well as tax positions taken in jurisdictions outside of the U.S.

¹ Schedule UTP requires firms to disclose the uncertain tax positions the firm recorded on financial statements in accordance with ASC 740-10 (FIN 48). The sum of all the uncertain tax positions a firm has taken in prior years is the unrecognized tax benefit (UTB) of the firm. We detail both IRS Schedule M-3 and Schedule UTP in the section of the article "Background".

² As well, in September of 2010 the IRS stated that revisions to Schedule M-3 were being contemplated due to the implementation of Schedule UTP (IRS, 2010-75). While the IRS in 2010 did not specify precisely what these revisions might entail, they did state "that the implementation of Schedule UTP is likely to reduce the need for some of the information currently reported on the Schedule M-3" (IRS 2010-75, p. 14–15).

In contrast, academic research by Donohoe and McGill (2011) suggests that Schedule M-3 was perceived negatively by investors, as evidenced by a negative market reaction to the announcements leading up to the promulgation of Schedule M-3. They argued that this negative market reaction was driven by investors believing that the Schedule M-3 would impose significant tax costs on corporate taxpayers, as it would allow the IRS to identify audit issues in corporate returns. Furthermore, testimony by Edward Kleinbard to the U.S. Senate Committee on Finance advocated for Congress to require firms to make their Schedule M-3 reconciliations public, arguing that doing so would "have a modestly helpful impact on curbing corporate tax shelter activities" (Kleinbard, 2006).

In our article, we examine the market reaction to the IRS announcement on May 10, 2013, exempting firms with total assets between \$10 million and \$50 million from Schedule M-3. We conduct this analysis to shed further light on the ongoing debate as to whether the IRS should rely more on Schedule UTP rather than Schedule M-3, or entirely do away with Schedule UTP as was proposed in the 2018 TIGTA report. As such, our study contributes to forensic and investigative accounting by providing conclusions to the IRS as to how to better identify and investigate the aggressive tax positions of corporate taxpayers.

To investigate how investors perceived exemption from Schedule M-3, we examine stock returns for the affected firms around the date the IRS announced their policy of exemption from Schedule M-3 and find evidence of a positive and significant reaction. We repeat this analysis for a control sample of firms above the exemption threshold and find no evidence of a market reaction for these firms. Taken together, these results suggest that investors perceived exemption from Schedule M-3 as increasing shareholder wealth due to the ability of firms to not disclose information that would enhance the ability of the IRS to identify audit issues.

A unique feature of our study is that we examine stock price reactions to the exemption from mandatory tax disclosure after firms have been subject to Schedule M-3. Investors in Edwards, Koester and Shevlin (2010), Donohoe and McGill (2011) and Abernathy et al. (2013) had to infer ex-ante what the potential costs and benefits of increased mandatory tax disclosure to the IRS would be on firms in the future. Thus, investors in our setting have been able to better assess (1) how well the IRS has been able to use Schedule M-3 information and (2) what affect Schedule M-3 has actually had on shareholder wealth.³ As a result, investors should be better able to value the effect of this exemption in our setting.

Our study makes an important contribution to a stream of literature on the effect of mandatory private tax disclosure to the IRS on firm value. The results from Edwards et al. (2010), Donohoe and McGill (2011), and Abernathy et al. (2013) all suggest that changes in mandatory IRS disclosure policy may have a greater impact on small firms. Donohoe and McGill (2011) further concludes that investors perceived Schedule M-3 disclosure as decreasing firm value. We answer the call by Frischmann (2013, 50) to clarify the findings from these studies and better understand the effect private disclosure to regulatory agencies has on firm value by "identifying types of firms that are more impacted than others from disclosure of new private information to regulatory agencies."

We focus our analysis on a change in mandatory tax disclosure limited to a group of small firms which may be more sensitive to changes in mandatory tax disclosure. Whereas prior research by Edwards et al. (2010), Donohoe and McGill (2011), and Abernathy et al. (2013) has focused on ex-ante investor perceptions of future mandatory disclosure requirements, we study investor reactions around the announcement of exemption from mandatory disclosure after firms have been subject to the disclosure. Our results suggest that investors perceived the exemption from mandatory tax disclosure as increasing shareholder wealth. Given that Schedule UTP was already in place on the date (May 10, 2013) that firms were exempted from Schedule M-3, we argue that the positive market reaction we document is a result of investors in small firms perceiving that Schedule UTP disclosure is less effective to the IRS than Schedule M-3. As such, the investor reaction for firms exempt from Schedule M-3 suggests that investors believe firms will be able to avoid more in taxes in the years after this IRS announcement.

Furthermore, the event study results from Abernathy et al. (2013) suggest that investors reacted favorably to the IRS announcement that the finalized version of Schedule UTP would not be as onerous as previously expected. We conclude from our results that the IRS should consider requiring previously exempted firms to once again file Schedule M-3, and to dedicate more resources to improving the effectiveness of Schedule M-3 in order to identify additional audit issues of corporate taxpayers.

³ Boynton, Defilippes, Legel, and Reum (2011) and Boyton, Defilippes, and Legel (2008) provide detail regarding the types of disclosures (aggregated) firms are making on Schedule M-3, in addition to assessing how well firms are complying with Schedule M-3. Therefore, investors in our setting have more information available to them regarding Schedule M-3 than when Schedule M-3 was first introduced.

Our article is organized as follows. In the next section, we provide a background of Schedule M-3, FIN 48, and Schedule UTP. In the third section we develop our formal hypothesis. The fourth section details our sample selection and research methodology. The fifth section presents our results, and the final section concludes the study.

Background

The Need for Schedule M-3

The widening gap between book income and taxable income in the U.S. during the 1990's was widely viewed as indicative of corporate tax shelter activity (Boynton et al., 2011; Desai, 2003; Talisman, 1999). During this time period there was also a fundamental shift in how tax departments were evaluated, moving away from operating as cost centers and towards a department that generated profits (Robinson, Sikes, and, Weaver, 2010; McGill and Outslay, 2004). Corporate tax managers were under pressure to keep effective tax rates "low and in line with that of competitors" (U.S. Department of the Treasury, 1999, 14).

As the sophistication and incentives of corporate tax departments increased, Schedule M-1 disclosures which had been required since 1964 were becoming less useful to the IRS in identifying audit issues (Lipin, 2012). Although Schedule M-1 reconciles the difference between book income and taxable income, it allows firms to choose their own method and terminology in presenting differences and "line items [are] frequently netted and/or combined" (Boynton and Wilson, 2006, 2). This flexibility in disclosure allowed firms to "conceal aggressive tax positions" (Singleton and Smith, 2011, 40).

In the Schedule M-1 system, book-tax differences driven by tax sheltering transactions "often remain hidden, and corporations have no incentive to expose the existence and nature of their shelters voluntarily" (U.S. Department of the Treasury, 1999, 15). Thus, while Schedule M-1 allowed the IRS to identify the gap between book income and taxable income, it was deficient in understanding what caused the gap (Weiner, 2007). In light of the diminished usefulness of Schedule M-1 to the IRS, Mills and Plesko (2003) recommended substantial revisions that would allow the IRS to improve its ability to detect aggressive tax positions.

In response to the shortcomings of Schedule M-1, the IRS required Schedule M-3 for corporate taxpayers with over \$10 million in assets beginning with tax years ending on or after December 31, 2004. Part I of Schedule M-3 requires a reconciliation of worldwide income to net income of taxable entities while Parts II and III require a detailed reconciliation of book income and expense accounts to taxable income and expense, also specifying whether the difference between the two is of a permanent or temporary nature. The reconciliation of book income to tax income increased from 10 lines to 68, providing the IRS with a more detailed understanding of why a firm's book income differed from taxable income. By 2006 "the IRS was already using Schedule M-3 data to select tax returns for examination" (Tandon, 2006, 133). In addition to aiding in the selection of tax returns to examine, Schedule M-3 then allowed the IRS to "precisely identify aggressive transactions…as well as narrowing the issues examined" (Kaye, 2010, 599).

Results presented by Boynton, DeFilippes, Legel, and Reum (2011) suggest that in the three years after Schedule M-3 was implemented (2005–2007), the gap between taxable income and book income decreased each year.⁴ This descriptive evidence is consistent with Schedule M-3 curtailing the aggressive tax strategies implemented in the years prior to Schedule M-3, when Schedule M-1 was the required book-to-tax income reconciliation. The steady decline in the gap between book income and taxable income is likely attributable to the three page reconciliation of book income to taxable income on Schedule M-3 not allowing firms to conceal their aggressive tax strategies as easily as on Schedule M-1. Collectively, the prior literature and IRS data suggest that Schedule M-3 provides a significant amount of information to the IRS that limits the ability of firms to implement aggressive tax planning strategies.

The Need for FIN 48

FIN 48 was implemented by the FASB to address the significant diversity in practice of how firms accounted for their uncertain tax positions (FASB, 2006a). The Interpretation set forth a recognition threshold and measurement attribute for the recognition and measurement on financial statements of tax positions taken on a tax return.⁵ The recognition threshold requires firms to first evaluate whether a given tax position, based upon its technical merit, is more-likely-thannot to be sustained by the taxing authority upon examination.⁶ The amount of a tax position that meets the recognition threshold is then measured as the largest amount of benefit that is cumulatively greater than 50% likely of being realized

⁴ See Figure 3 in Boynton, DeFilippes, Legel, and Reum (2011).

⁵ The decision to not file a tax return in a jurisdiction also constitutes a tax position.

⁶ The Interpretation states that firms are required to assume that the tax position will be examined by the taxing authority and that the taxing authority will have full knowledge of all relevant information (FASB 2006a).

upon ultimate settlement. The remainder of the tax position which does not satisfy the measurement attribute is referred to as the unrecognized tax benefit.

In addition to standardizing how firms evaluate their tax positions, FIN 48 also requires firms to disclose a tabular reconciliation of the beginning and ending unrecognized tax benefits (UTB) as well as including the amount of UTB that, if recognized would affect the effective tax rate (ETR).⁷ The Interpretation also requires firms to disclose the amount of accrued interest and penalties related to the UTB as well as where on the income statement this accrued interest and penalties is reported and include a discussion of their open tax years and make a forward-looking disclosure of the expected change in the UTB over the next 12 months.

While the stated goal of the FASB in issuing FIN 48 was to increase the relevance and comparability of the income tax footnote, experts suggested that the required disclosures may "provide a "roadmap" for the tax authority" (Spatt, 2007, 3) that would cost U.S. firms billions of dollars in added IRS settlements (Yoon, 2006). Proponents of FIN 48 countered these criticisms by claiming that "the IRS already had a far more detailed and effective "roadmap" in its Schedule M-3 than it would be provided by any disclosures in the final Interpretation" (FASB, 2006b).

The Need for Schedule UTP

On January 26, 2010, IRS Commissioner Doug Shulman introduced Schedule UTP in a speech made to the New York State Bar Association Taxation Section (Shulman, 2010). In his remarks he emphasized a desire to increase efficiency in the audit process and to reduce the amount of time the IRS spent searching for taxpayer issues (Shulman, 2010). Since then, the budget of the IRS has been reduced by 10%, and the IRS workforce has decreased to under 90,300 employees which represents its lowest level in over a decade (IRS Oversight Board, 2013).⁸ Both the message of Commissioner Shulman's speech and contemporaneous IRS budget reductions suggest Schedule UTP was designed and implemented to provide automated, standardized audit information to an agency with reduced economic resources and human capital.

When Schedule UTP was finalized on September 24, 2010, it required disclosure of the individual uncertain tax positions comprising the U.S. portion of a firms' unrecognized tax benefit balance. For firms with \$100 million or more in total assets this disclosure was required beginning in tax year 2010. Firms with total assets between \$50 million and \$100 and then \$10 million and \$50 million would begin filing Schedule UTP beginning in tax years 2012 and 2014, respectively.

On the date Schedule UTP was first announced by Commissioner Shulman, January 26, 2010, investors reacted negatively (Abernathy, Davenport, and Rapley, 2013). This event study result suggests that investors perceived Schedule UTP as increasing the tax costs of affected firms, similar to Schedule M-3. However, on the date Schedule UTP was finalized, September 24, 2010, investors reacted favorably, as the IRS also announced numerous modifications to Schedule UTP that had the effect of significantly decreasing the amount of tax information collected on the Schedule. Abernathy et al. (2013) conclude from these results that investors did not perceive Schedule UTP to be as useful to the IRS as Schedule M-3.

Figure 1: IRS Funding History

⁷ Unrecognized tax benefits are a contingent tax liability that represent the amount of additional taxes the firm expects to pay to the taxing authority if their uncertain tax positions were not sustained upon examination.

⁸ IRS funding has also decreased in every fiscal year since 2010. See Figure 1.

IRS Funding History, FY2002-2014



IRS Full-Time Employment History



Number of Full-Time Equivalents, FY2001-2012

Source: IRS Oversight Board FY2014 IRS Budget Recommendation Special Report

The decision to predicate this mandatory private disclosure to the IRS on the public disclosure of unrecognized tax benefits on financial statements left open the possibility of taxpayer non-compliance. While FIN 48 provided firms a standardized approach to accounting for tax positions with uncertain future outcomes, empirical evidence has emerged indicating that substantial variation existed in how firms apply the standard. For example, DeSimone, Robinson and Stomberg (2014) document that firms entering into the same uncertain tax position with the same auditor in the same city reserved for the position differently. Thus, despite the FASB's intent to increase the comparability of firms' accounting for uncertain tax positions, substantial discretion remains.

If firms were not applying FIN 48 to their uncertain tax positions consistently, would linking Schedule UTP to FIN 48 disclosures further exacerbate this behavior? Abernathy et al. (2013) hypothesized that firms would use the discretion afforded within FIN 48 to circumvent Schedule UTP disclosure. Results from their analysis of 5,068 firm-years' financial statement reporting after Schedule UTP was introduced support this conjecture. These firms recorded fewer current-year additions to their UTB in the year Schedule UTP was announced, 2010, compared to 2007–2009. Subsequent work by

Honaker and Sharma (2017) and Howard and Massel (2019) continued to find evidence that firms underreport UTB in the years after Schedule UTP was introduced. In contrast to the prior literature on Schedule M-3, the results of prior literature on Schedule UTP are consistent with firms being able to circumvent Schedule UTP disclosure, which limits the effectiveness of the disclosure to the IRS.

Exempting firms from Schedule M-3

Almost ten years after the Internal Revenue Service (IRS) finalized Schedule M-3 the IRS announced on May 10, 2013, that firms with total assets between \$10 million and \$50 million were exempt from Parts II and III of Schedule M-3.⁹ The official explanation provided by the IRS for the exemption was "to reduce filing burden and simplify reporting for these corporations" (IRS, 2013). The IRS also stated in this announcement that they were considering further changes to Schedule M-3 for firms with greater than \$50 million in total assets.¹⁰

Because Parts II and III of Schedule M-3 represent virtually all of the information from this tax disclosure perceived by the Financial Accounting Standards Board as "detailed and effective" (FASB, 2006b, 4), this exemption appears to represent a substantial loss of information to the IRS in the audit of affected firms. In fact, during a 2006 FASB meeting in which critics of FIN 48 *Accounting for Uncertainty in Income Taxes* argued that its disclosures would provide a road map to a firms' uncertain tax positions, board member Katherine Schipper opined that Schedule M-3 was "a more detailed and effective roadmap" to the IRS than any public disclosure the FASB would require in FIN 48 (FASB, 2006b, 4). Exempt firms will now only be required to file the Schedule M-1, *Reconciliation of Income (Loss)* which provides significantly less detail and less standardized information to the IRS about differences between book income and taxable income.

In exempting these firms from Schedule M-3, the IRS also solidified their intention to rely more on Schedule UTP, *Uncertain Tax Position*, to identify firms for audit. To be certain, this decision was not made in a vacuum; as far back as September of 2010 the IRS stated that revisions to Schedule M-3 were being contemplated due to the implementation of Schedule UTP (IRS, 2010-75). While the IRS in 2010 did not specify precisely what these revisions might entail, they did state "that the implementation of Schedule UTP is likely to reduce the need for some of the information currently reported on the Schedule M-3" (IRS, 2010-75, p. 14–15).

The implementation of Schedule UTP by the IRS and their stated intention to decrease reliance on Schedule M-3 coincides with funding of the IRS having consistently decreased since 2010 (IRS Oversight Board, 2013). In light of reduced funding, the effective use of standardized audit tools such as Schedule M-3 and Schedule UTP to identify taxpayer issues and prioritize audit resources increases in necessity to the IRS. However, the strategy to rely less on Schedule M-3 and more on Schedule UTP comes with considerable risk to the IRS. By design, Schedule UTP disclosure is only useful to the IRS if taxpayers record reserves for their unrecognized tax benefits (UTB) on financial statements. To the extent firms do not record reserves, or record fewer reserves, the usefulness of Schedule UTP as an audit tool to the IRS is diminished.

Consistent with concerns about the usefulness of Schedule UTP, Abernathy, Davenport and Rapley (2013) finds that firms recorded fewer current-year additions to UTB immediately after Schedule UTP was introduced. In concurrent work, Towery (2015) documents that this change in disclosure was limited to financial statement reporting; the underlying tax positions of firms did not change. Taken together, the results from these two studies suggest that after Schedule UTP was introduced firms reduced their financial statement disclosure of UTB to circumvent Schedule UTP. These results also support the findings of the TIGTA audit of Schedule UTP that reported "the lack of information and details contained on Schedule UTP has, in most instances, rendered it impractical for the examination team to use it as anything more than a confirmation that certain issues exist" (2018, 9).

More recent work by Honaker and Sharma (2017) and Howard and Massel (2019) suggests that firms have continued to underreport their unrecognized tax benefits on financial statements in order to circumvent Schedule UTP. These results further suggest that not only is Schedule UTP designed in such a manner as to make it susceptible to firms being able to avoid disclosing significant tax issues on the schedule, but that it also negatively affects the disclosure quality of tax information on financial statements.

Hypothesis Development

Hypothesis Development for Exemption from Schedule M-3 Disclosure

⁹ The IRS released a draft version of Schedule M-3 on January 28, 2004 before finalizing it on October 25, 2004. See Donohoe and McGill (2011) for a comprehensive review of Schedule M-3's implementation.

¹⁰ IRS data from 2007 suggests that 26,416 firms filed a Schedule M-3 with total assets between \$10 million and \$50 million (IRS 2021)

Results from recent studies on the effect of increased private mandatory tax disclosure to the IRS on firm value suggest that small firms are affected more by these changes in tax disclosure policy. Edwards et al. (2010) use a sample of 260 firms from the S&P 500 and find no evidence of a market reaction to IRS Announcement 2010-09 which introduced Schedule UTP. In contrast, Abernathy et al. (2013) do not focus on only S&P 500 firms, but rather use a broader sample of all affected publicly traded U.S. firms. This larger sample, consisting of small and large firms provided evidence that investors perceived IRS Announcement 2010-09 as decreasing firm value.¹¹ Reconciling their results with those from Edwards et al. (2010) they explain that "changes in tax policy may have a greater impact for smaller firms" (Abernathy et al., 2013, 26). Donohoe and McGill (2011) provide evidence that investors perceived Schedule M-3 as decreasing firm value, except for the largest firms in their sample for whom they found no reaction. Thus, results from prior research suggest that increased mandatory disclosure to the IRS appears to (1) decrease firm value and (2) disproportionately affect small firms.

Investors in small firms should perceive exemption from Schedule M-3 disclosure as increasing firm value because it represents a significant information loss to the IRS which allows these firms to avoid more taxes in subsequent years. Donohoe and McGill (2011) conclude that Schedule M-3 imposed net costs on firms, in part because it deterred firms from engaging in aggressive tax planning opportunities. Removing the deterrence effect should allow firms to resume pursuing these tax planning opportunities. Furthermore, the lower detection risk should then lead to these firms ultimately realizing the tax savings of these strategies, increasing firm value.

Similarly, investors may also perceive exemption from Schedule M-3 as increasing firm value because the exemption signals that the IRS is less interested in auditing small firms. This decreased interest in small firms may further reduce their audit probabilities. This reduced audit probability should have the mechanical effect of increasing the likelihood that aggressive transactions go undetected and the statutes of limitations lapsing more frequently. Statistics from the *IRS Data Book* indicate that 227 firms with \$10 million to \$50 million in assets had tax returns examined in 2012 with aggregate, unagreed amounts totaling \$239 million (IRS, 2012). While these amounts are insignificant to the IRS, they represent a substantial amount to small firms individually.

As a result of all the above arguments, we predict that the IRS announcement exempting firms from Schedule M-3 disclosure will be received positively by investors in firms with assets between \$10 million and \$50 million.

Hypothesis: Investor reaction to decreased Schedule M-3 disclosure requirements will be positive.

Sample Selection and Methodology

Sample and Descriptive Statistics

To test our hypothesis that exemption from Schedule M-3 increased shareholder wealth, our sample begins with all U.S. firms available in the Compustat Annual Industrial file with total assets between \$10 million and \$250 million in their most recent financial statements prior to the May 10, 2013, IRS announcement. We classify firms with \$10 million to \$50 million in assets as our treatment sample because these are the firms that should benefit from the exemption from mandatory Schedule M-3 disclosure. We classify firms with \$55 million to \$250 million in assets as our control sample because firms in this group were not affected by the IRS announcement.¹² We conduct our test on treatment and control sample firms with trading data available on The Center for Research in Security Prices (CRSP). We limit our analysis of stock prices to actively traded, ordinary common shares. The sample selection procedure, detailed in Table 1 Panel A, results in a treatment sample of 307 firms and a control sample of 531 firms.¹³

To be certain, using financial statement total assets to split our sample into treatment and control firms is potentially subject to misclassification because the consolidated entities for financial accounting may differ for tax purposes. Under GAAP, the consolidated financial statements include the firms for which the parent has at least a 50% interest. For tax purposes, consolidation is only allowed when the parent has at least an 80% interest. These consolidation differences leave open the possibility that total assets for tax purposes are systematically lower than as reported on financial statements. For this reason, we include firms with total financial statement assets of up to \$250 million in our control sample which increases the likelihood that some or all of the consolidated entities were not affected by the IRS exemption.

¹¹ The Abernathy et al. (2013) samples include firms with assets of \$10 million or greater.

 ¹² We do not use firms with total assets of less than \$10M as a control sample because the IRS announcement has the effect of likely exempting these firms for a longer period of time. Thus, firms with total assets below \$10M also may benefit from the exemption.
 ¹³ We also use firms with total assets between \$50M and \$100M as well as \$50M and \$250M as control samples and find similar results.

The industry distribution of our treatment and control sample firms is presented in Panel B of Table 1. In both the treatment and control sample, the largest concentration of firms is within the manufacturing industry. We also present industry distribution for the Compustat universe of actively traded firms with necessary trading data. This comparison leads to the observation that both of our treatment and control samples are weighted more towards manufacturing and less towards financial services than the overall Compustat universe.

Descriptive statistics presented in Panel C of Table 1 indicate that the mean treatment firm had pre-tax book income (PTBI) of \$-6.92 million, and total assets of \$28.10 million, while the mean control firm had \$-3.90 million of PTBI and total assets of \$140.13 million. The mean market value of equity for treatment sample firms is \$55.15 million and \$245.85 million in our control sample. Firms in our treatment sample have mean UTB of \$.33 million while firms in our control sample have UTB of \$1.41 million. Because these small firms are less likely to have extensive foreign tax issues due to their small size, these UTB balances are more likely to reflect uncertainties related to U.S. tax issues.¹⁴

Panel A: Sample Determination			
Treatment	Firms	Control	Firms
U.S. Firms with AT between 10M and		U.S. Firms with AT between 55M and	
\$50M	681	\$250M	815
Less firms with missing trading data	-364	Less firms with missing trading data	-265
Less trusts and LP's	-10	Less trusts and LP's	-19
Treatment Sample	307	Control Sample	<u>531</u>

Table 1: Sample Determination, Industry Distribution, Descriptive Statistics –Schedule M-3 Event Study Sample

Panel B: Industry Distribution

		Treatment					
Four-digit		Sample		Control Sample		Compustat Firms	
SIC code	Industry Affiliation	N	Percent	Ν	Percent	N	Percent
1–1499	Agriculture, Forestry, and Mining	17	5.54	27	5.08	156	4.98
1500-2000	Construction	3	.98	3	.56	39	1.25
2000–3999	Manufacturing	185	60.26	290	54.61	1,271	40.61
4000–4999	Transportation and Communication	10	3.26	24	4.52	251	8.02
5000–5999	Wholesale	17	5.54	44	8.29	275	8.79
6000–6999	Financial services	12	3.91	34	6.40	640	20.45
7000–7999	Business and Personal Services	47	15.31	82	15.44	375	11.98
8000-8999	Other Services	15	4.89	26	4.90	118	3.77
9000+	Public Administration	<u>1</u>	.33	<u>1</u>	<u>.19</u>	<u>5</u>	.16
	Total	307	100.00	531	100.00	3,130	100.00

Panel C: Descriptive Statistics

(Treatment)						
Variable	Ν	Mean	Std. Dev.	Q1	Median	Q3
PTBI	307	-6.92	12.35	-12.33	-3.45	.91
AT	307	28.10	11.20	18.14	26.98	37.48
MKVALT	304	55.15	62.71	17.25	32.26	64.36
UTB (millions)	307	.33	1.18	0.00	0.00	.01
(Control)						
PTBI	531	-3.90	34.91	-16.79	2.56	12.52
AT	531	140.13	55.35	91.94	139.15	185.55
MKVALT	519	245.85	343.98	61.65	146.46	277.50

¹⁴ FIN 48 requires firms to reserve for UTB's in all tax jurisdictions. For firms with international operations, it is difficult to determine if the UTB disclosed by a firm relates to a U.S. tax position. For our sample of firms, the possibility does exist that the UTB relates to a state tax position.

This table presents descriptive statistics for the treatment and control samples used to test the stock price reaction to the IRS announcement exempting firms with total assets between \$10M and \$50M from Parts II and III of Schedule M-3. Panel A presents sample selection. Panel B presents industry distribution of the treatment and control samples, as well as a tabulation of all firms in the Compustat universe. Panel C presents descriptive statistics for the treatment and control samples.

Variables are defined in Appendix B.

Market Response to Exemption from Mandatory Schedule M-3 Disclosure

Our hypothesis tests are based on an event study research design which assumes that the event information of interest is impounded into equity prices within the event window. Our tests also rely on the correct identification of information events. Our search for IRS announcements pertaining to Schedule M-3 begins on the IRS webpage dedicated to "Tax Information for Corporations." From here, updates related to Schedule M-3 for Large Business and International (LB&I) can be found. The IRS announcement that Schedule M-3 was no longer required for firms with assets between \$10 million and \$50 million is listed as occurring on May 10, 2013. On this page there are no other prior announcements that the IRS was considering exempting firms from Schedule M-3. Furthermore, the IRS decision to exempt firms from Schedule M-3 was detailed on May 10, 2013, on the websites of the AICPA and KPMG, and on May 13, 2013, on the website of the *Journal of Accountancy*.

We use a multivariate regression model introduced by Schipper and Thompson (1983) to test the effect of the May 10, 2013, IRS announcement on our treatment and control samples. This methodology has been used in several recent mandatory disclosure event studies in accounting including Frischmann, Shevlin, and Wilson (2008), Donohoe and McGill (2011) and Abernathy et al. (2013). In order to condition the returns generating process on the occurrence or nonoccurrence of an event, a binary variable is set equal to one on key event dates and zero otherwise. In our setting, the coefficient on the binary variable for the May 10, 2013, event measures the specific effect the IRS exemption announcement had on stock returns. We use a three-day event window to allow for the possibility that news of the exemption was known one day early or was released after the close of trading on May 10. We use the following regression model, controlling for common risk factors identified by Fama and French (1993):

$$R_{pt} = \alpha_p + \beta_{1p} (R_{mt} - R_{ft}) + \beta_{2p} (SMB_t) + \beta_{3p} (HML_t) + \sum_{k=1}^{K} g_{pk} D_{kt} + e_{pt}$$
(1)

where R_{pt} is the average daily return on portfolio p on day t (t=1, 2,...,t), t is the total number of daily stock return observations (250) from June 1, 2012 to May 31, 2013, α_p is the intercept coefficient for portfolio p, R_{mt} - R_{ft} is the riskadjusted market return on day t, β_{1p} is the risk coefficient for portfolio p, SMB_t is the daily return on a portfolio of small firm stock returns less a portfolio of large firm stock returns, β_{2p} is the coefficient on the small minus big portfolio, HML_t is the daily return on a portfolio of high book-to-market value firms less the return on a portfolio of low book-to-market value firms, β_{3p} is the coefficient on the high minus low portfolio, g is the effect of the event on portfolio p's stock returns on the event date k. K is the number of events in this test: 1. D_{kt} is a binary variable for the kth event set equal to 1 for the 3-day announcement window, 0 else; and e_{pt} is random disturbance assumed to be both normal and independent of the explanatory variables. We estimate this regression separately for our treatment and control sample of firms.

Empirical Results

Market Response to Exemption from Schedule M-3 Disclosure

We present results from our test of our hypothesis in Table 2. Panel A presents the portfolio cumulative abnormal return (CAR) and test statistic for our treatment sample of firms on the three-day event window where CAR is the estimated coefficient from g_{pk} in Equation (1). We find evidence of a significantly positive market reaction in our treatment samples (CAR = 0.31). The abnormal return found in our three-day event window, 0.31, multiplied by the average market value of equity for firms in our sample (\$55.15 million) amounts to a \$.171 million increase in market value for the average treatment firm. This increase in market value may be attributable to investors valuing the decrease in future compliance costs and or the decrease in future tax burdens.

Results presented in Panel B Table 2 indicate that there was no market reaction for firms in our control sample (CAR = .08). Overall, the results presented in Table 2 indicate that only investors in firms exempted from Parts II and III of Schedule M-3 reacted favorably to the announcement, consistent with our hypothesis.

Table 2: Market Response to Exemption from Mandatory Schedule M-3 Disclosure Regressions of Portfolio Returns on Market Returns

$$R_{pt} = \alpha_p + \beta_{1p} (R_{mt} - R_{ft}) + \beta_{2p} (SMB_t) + \beta_{3p} (HML_t) + \sum_{k=1}^{K} g_{pk} D_{kt} + e_{pt}$$
(1)

Panel A: Portfolio Returns-Treatment Sample (N=307)

3-	Day Win	dow (t=-1,	0, +1)
Event date	CAR	RSE	t-stat
5/10/2013	0.31	0.12	2.66

Panel B: Portfolio Returns –Control Sample (N=531)

3-Day Window (t=-1, 0, +1)				
Event date	CAR	RSE	t-stat	
5/10/2013	0.08	0.15	0.55	

This table reports results for tests of the market response to exemption from mandatory disclosure of Schedule M-3.

Panel A presents results of estimating equation (1) using a treatment sample of firms (\$10 million to \$50 million in assets), and a three-day event window around the May 10, 2013, IRS announcement. Panel B presents results of estimating equation (1) using a control sample of firms (\$55 million to \$250 million in assets).

 R_{pt} is the average daily return on portfolio p on day t (t=1, 2, ..., t), t is the total number of daily stock return observations (250) from June 1, 2012 to May 31, 2013, α_p is the intercept coefficient for portfolio p, R_{mt} -R_{ft} is the risk-adjusted market return on day t, β_{1p} is the risk coefficient for portfolio p, SMB_t is the daily return on a portfolio of small firm stock returns less a portfolio of large firm stock returns, β_{2p} is the coefficient on the small minus big portfolio, HML_t is the daily return on a portfolio of high book-to-market value firms less the return on a portfolio of low book-to-market value firms, β_{3p} is the coefficient on the high minus low portfolio, g is the effect of the event on portfolio p's stock returns on the event date k. K is the number of events in this test: 1. D_{kt} is a binary variable for the kth event set equal to 1 for the three-day announcement window, 0 else; and e_{pt} is random disturbance assumed to be both normal and independent of the explanatory variables.

Coefficients significant at the 0.05 level, one-tailed, are bolded. Reported t-statistics are based on the reported robust standard errors (RSE).

Supplemental Analyses

In order to better understand whether the market reaction to exemption from Schedule M-3 varied with profitability we repeat our event study analysis but, consistent with Frischmann et al. (2008), drop firms with negative pre-tax book income over the previous five years. Using our treatment sample of 307 firms and keeping the 94 firms with positive pre-tax book income over the previous five years, we again find a positive and significant market reaction (p < 0.001). Using the GAAP ETR, long-run cash ETR, and book-tax differences as proxies for tax avoidance, we find that this profitable subsample of firms avoids little in taxes. The GAAP ETR of .310, long-run cash ETR of .330, and BTD of -.028, all lead to the conclusion that these profitable firms do not avoid much tax, but investors are reacting as if this conclusion may change in the future.

The stock price reaction for the 197 firms with negative pre-tax book income over the previous five years is insignificant (p = 0.146).¹⁵ These results suggest that the positive market reaction to exemption from Schedule M-3 was more pronounced for profitable firms.

After Schedule M-3 was implemented, Donohoe and McGill (2011) argue that the ability of firms with weaker external monitoring to continue avoiding taxes in an "ultra-aggressive" manner would likely be curtailed to some degree. In a similar vein, we consider whether there is a positive investor reaction to exemption from Schedule M-3 for firms with

¹⁵ Sixteen firms do not have five years of consecutive data to compute a long-run measure of profitability.

weaker external monitoring. To proxy for external monitoring, we build off previous studies by Hartzell and Starks (2003), Wahal and McConnell (2000), and Bushee (1998) that conclude influential institutional owners provide a valuable external monitoring function. In our setting we use the lack of an institutional block holder (i.e., greater than 5% owner of the firm's outstanding shares per 13F disclosure) as a proxy for weak external monitoring.¹⁶

This classification yields 49 firms with weak monitoring (i.e., no institutional block holder) and 257 with strong monitoring. We find evidence of a significant positive market reaction for the 49 firms with weak monitoring (p = 0.03) and no evidence of a market reaction for the 257 firms with strong monitoring (p = 0.149). These results suggest that investors perceive that firms with weaker external monitoring will be able to increase their levels of tax aggressiveness after exemption, consistent with Donohoe and McGill (2011).

Summary and Conclusions

When Schedule M-3 was first introduced in 2004 it was viewed by academics, FASB board members, and the U.S. Treasury as a major new source of information to the IRS. Shortly after being implemented by the IRS, practitioners asserted that Schedule M-3 disclosures were already being used by the Service to identify firms for audit. Nearly ten years later the IRS signaled their intention to rely less on Schedule M-3. On May 10, 2013, the IRS announced that firms with less than \$50 million in total assets are exempt from Parts II and III of Schedule M-3 and that changes for larger firms may be made in the future. We find an investor reaction to this IRS announcement consistent with investors in small firms perceiving the exemption as increasing shareholder wealth.

Our results provide evidence consistent with the conclusion that Schedule M-3 is an effective audit tool to the IRS, as investors in small firms reacted favorably to the announcement that firms with between \$10 million and \$50 million in total assets were exempt from Schedule M-3. Our findings, combined with data provided by the IRS that indicates that in the years after Schedule M-3 was implemented, the gap between book and taxable income narrowed provides further support for the argument that Schedule M-3 is an effective audit tool. As such, our recommendation would be that the IRS consider relying more on Schedule M-3, and investing more resources towards modifications to Schedule M-3 that will further increase its effectiveness. Our study contributes to the forensic accounting literature by examining the investor reaction to the exemption of an IRS audit tool that prior literature and IRS data suggest has been effective in curtailing the tax aggressiveness of firms and led to a narrowing of the gap between book income and taxable income.

¹⁶ We require the firm to have an institutional block holder for eight consecutive quarters leading up to the May 10, 2013 IRS announcement to alleviate concerns that the institutional block holder is transient in nature.

References

- Abernathy, J. L., S. Davenport, and T. Rapley. 2013. Schedule UTP: Stock price reaction and economic consequences. *Journal of the American Taxation Association*, 35(1), 25–48.
- Boynton, C., P. Defilippes, E. Legel, and T. Reum. 2011. A first look at 2007 Schedule M-3 reporting by large corporations. *Tax Notes* (August 15), 689–725.
- Boynton, C., P. Defilippes, and E. Legel. 2008. A first look at 2005 Schedule M-3 corporate reporting." *Tax Notes, Special Report*, 563–96.
- Boyton, C., and W. Wilson. 2006. A review of Schedule M-3 : The Internal Revenue Service's new book-tax reconciliation tool. *Petroleum Accounting and Financial Management*, 25(1), 1–6.
- Bushe, B., 1998. The influence of institutional investors on myopic R&D investment behavior. *The Accounting Review*, 73(3), 305–333.
- Cazier, R., S. Rego, X. Tian, and R. Wilson. 2009. Early evidence on the determinants of unrecognized tax benefits. Working paper, The University of Iowa.
- Desai, M. A. 2003. The divergence between book income and tax income. Tax Policy and the Economy, 17, 169–206.
- De Simone, L., J. Robinson, and B. Stomberg. 2014. Distilling the reserve for uncertain tax positions: the revealing case of black liquor. *Review of Accounting Studies*, 19, 456–72.
- Donohoe, M. P., and G. McGill. 2011. The effects of increased book-tax difference tax return disclosures on firm valuation and behavior. *The Journal of the American Taxation Association*, 33(2), 35–65.
- Edwards, A., A. Koester, and T. Shevlin. 2010. Examining investor reaction to IRS Announcement 2010-09. *Tax Notes*, 90(9), 669–674.
- Fama, E., and K. French. 1993. Common risk factors in the returns on stocks and bonds. Journal of Finance 33: 3-56.
- Financial Accounting Standards Board (FASB). 2006a. Accounting for Uncertainty in Income Taxes: An Interpretation of FASB Statement No. 109. FASB Interpretation No. 48. Norwalk, CT: FASB.
- Financial Accounting Standards Board (FASB). 2006b. Minutes of the May 10, 2006 Board Meeting Uncertain Tax Positions: Disclosure and Sweep Issues. 1–9. Available online at: http://www.fasb.org/board_meeting_minutes/05-10-06_utp.pdf
- Frischmann, P. J., T. Shevlin, and R. Wilson. 2008. Economic consequences of increasing the conformity in accounting for uncertain tax benefits. *Journal of Accounting and Economics*, 46(2-3), 261–278.
- Frischmann, P.J. 2013. Discussion of: Schedule UTP: Stock Price Reaction and Economic Consequences. *Journal of the American Taxation Association*, 35(1), 49–51.
- Graham, J. R., and A. L. Tucker. 2006. Tax shelters and corporate debt policy. *Journal of Financial Economics* 81(3): 563–594.
- Hartzell, J.C., and L.T. Starks. 2003. Institutional investors and executive compensation. *Journal of Finance* 58(6): 2351–2374.
- Honaker, K., and D.S. Sharma. 2017. Does Schedule UTP have uniform long run effects on corporate tax planning. *Journal of the American Taxation Association*, *39*(2), 63–79.
- Howard, J., and N. Massel (2019). The effectiveness of Schedule UTP: a comparison of multinational and domestic firms. *Advances in Taxation*, 26, 33–62.
- Internal Revenue Service (IRS). 2021. Returns Filed, Taxes Collected, & Refunds Issued. Available at: https://www.irs.gov/statistics/returns-filed-taxes-collected-and-refunds-issued
- Internal Revenue Service (IRS). 2010. Announcement 2010-75: Reporting of uncertain tax positions. Available at: <u>http://www.irs.gov/irb/2010-41_IRB/ar11.html</u>
- Internal Revenue Service (IRS). 2012. Data book publication 55B. Washington, D.C. March 2013. Available at: http://www.irs.gov/pub/irs-soi/12databk.pdf

- Internal Revenue Service (IRS). 2013. Schedule M-3 for Large Business & International (LB&I). Available at: http://www.irs.gov/Businesses/Corporations/Schedule-M-3-for-Large-Business-&International-(LB&I)
- Internal Revenue Service (IRS). 2021. SOI Tax Stats Corporate Schedule M-3. Available at: https://www.irs.gov/statistics/soi-tax-stats-corporate-schedule-m-3
- Internal Revenue Service (IRS) Oversight Board. May 2013. FY2014 IRS Budget Recommendation Special Report. Available at: http://www.treasury.gov/IRSOB/reports/ Documents/IRS Budget_Web061413.pdf
- Kaye, T. A. 2010. Regulation of corporate tax shelters in the United States. *American Journal of Comparative Law*, 58, 585–604.
- Kleinbard, E. 2006. Testimony of Edward D. Kleinbard–Cleary, Gottlieb, Steen & Hamilton, LLP Before the Committee on Finance United States Senate. June 13, 2006. Available at: https://www.finance.senate.gov/imo/media/doc/061306testek.pdf
- Lipin, I. A. 2012. Failing corporate tax transparency and the immediate need to reduce overburdening duplicative tax reporting requirements. *Akron Tax Journal*, 27, 119–152.
- Lisowsky, P. 2010. Seeking shelter: empirically modeling tax shelters using financial statement information. *The Accounting Review* 85(5): 1693–1720.
- McGill, G. A., and E. Outslay. 2004. Lost in translation: detecting tax shelter activity in financial statements. *National Tax Journal*, 57(3), 739–756.
- Mills, L. F., and G. Plesko. 2003. Bridging the reporting gap : a proposal for more informative reconciling of book and tax Income. *National Tax Journal*, 56(3), 865–893.
- Robinson, J. R., S. Sikes, and C. Weaver. 2010. Performance measurement of corporate tax departments. *The Accounting Review*, 85(3), 1035–1064.
- Schipper, K., and R. Thompson. 1983. The impact of merger-related regulations on the shareholders of acquiring firms. *Journal of Accounting Research*, 21(1), 184–222.
- Shulman, D. 2010. Prepared remarks of Commissioner of Internal Revenue Douglas Shulman, New York State Bar Association Taxation Section Annual Meeting. Available at: <u>http://www.irs.gov/uac/Prepared-Remarks-of-IRS-Commissioner-Doug-Shulman-to-New-York-State-Bar-Association-Taxation-Section-Annual-Meeting-in-New-York-City,-Jan.-26,-2010</u>
- Singleton, R., and S. Smith. 2011. The increase in transparency requirements for corporate tax positions. *The CPA Journal*, 81(3), 38–41.
- Spatt, C. 2007. The economics of FIN 48: Accounting for uncertainty in income taxes. Available at: http://www.sec.gov/news/speech/2007/spch030807css.htm
- Talisman, J. 1999. Statement of Jonathan Talisman: testimony before the House Committee on Ways and Means hearing on corporate tax shelters. Washington, D.C.: U.S. Government Printing Office. November.
- Tandon, C. 2006. More than 200 returns targeted on basis of Schedule M-3 data. Tax Notes Today, 133-4.
- Towery, E. 2015. The interplay between mandatory disclosure regulation and voluntary disclosure regulation: evidence from Schedule UTP. Working paper, University of Georgia.
- Treasury Inspector General for Tax Administration (TIGTA). March 23, 2018. The Uncertain Tax Position statement does not contain sufficient information to be useful in compliance efforts. https://www.treasury.gov/tigta/auditreports/2018reports/201830023fr.pdf.
- U.S. Department of the Treasury. The problem of corporate tax shelters: discussion, analysis, and legislative proposals. Washington, D.C.: U.S. Government Printing Office, 1999.
- Wahal, S., and J.J. McConnell. 2000. Do institutional investors exacerbate managerial myopia? *Journal of Corporate Finance* 6(3): 307–329.
- Weiner, J. M. 2007. Closing the other tax gap: the book-tax income gap. Tax Notes, (May 28) 849-853.
- Wilson, R. 2009. An examination of corporate tax shelter participants. The Accounting Review 84(3): 969–999.

Yoon, L. 2006. That uncertain something: FASB and taxes. CFO.com (January 16). Available at: http://ww2.cfo.com/accounting-tax/2006/01/that-uncertain-something-fasb-and-taxes/

Appendix A: Key Mandatory Disclosure Pronouncement Regarding Schedule M-3, FIN 48, and Schedule UTP

Event	-	Date	Description
1		1/28/2004	IRS releases a draft version of Schedule M-3 and requests input from the public. (Donohoe and McGill 2011)
2		3/3/2004	FASB board members and staff meet with representatives from the SEC and major public accounting firms to address the discretion afforded to firms under SFAS no. 5 as it specifically pertains to accounting for uncertain tax positions. (Frischmann et al. 2008)
3		3/11/2004	IRS releases instructions for the draft version of Schedule M-3. (Donohoe and McGill 2011)
4		6/4/2004	IRS considers delaying the implementation of Schedule M-3 until late 2005. (Donohoe and McGill 2011)
5		10/25/2004	IRS finalizes Schedule M-3 and states it is unlikely further changes will be made. (Donohoe and McGill 2011)
6		12/2/2004	IRS releases finalized instructions for Schedule M-3. (Donohoe and McGill 2011)
7		7/14/2005	FASB issues an exposure draft of FIN 48. (Frischmann et al. 2008)
	8	1/11/2006	FASB meeting delays the effective date of FIN 48 to years beginning after December 15, 2006. (Frischmann et al. 2008)
	9	7/13/2006	FASB issues FIN 48. (Frischmann et al. 2008)
	10	1/17/2007	FASB board unanimously rejects a proposal to delay the implementation date of FIN 48 by one year. (Frischmann et al. 2008)
11		1/26/2010	IRS announces that corporations will be required to disclose uncertain tax positions on Schedule UTP beginning in tax year 2010. (Abernathy et al. 2013)
12		4/19/2010	IRS releases a draft version of Schedule UTP with instructions and requests input from the public. (Abernathy et al. 2013)
13		9/24/2010	IRS releases a finalized version of Schedule UTP and instructions. The IRS also states that Schedule UTP may reduce the need for some of the information reported on Schedule M-3 and necessitate revisions to Schedule M-3. (Abernathy et al. 2013)
14		5/13/2013	IRS announces that firms with total assets between \$10 million and \$50 million in total assets will be exempt from Parts II and III of Schedule M-3. The IRS also states that they are continuing to consider modifications to Schedule M-3 for firms with more than \$50 million in total assets. (Massel 2015)

Appendix B: Variable Definitions

PTBI	=	Pretax book income (Compustat PI)
AT	=	Total assets (Compustat AT)
MKVALT	=	Market value of equity: (Compustat CSHO*PRCC_C)
CASHETR	=	Long run cash effective tax rate, defined as the sum of five years' cash taxes paid (Compustat item TXPD)/(sum of five years' pre-tax income [Compustat item PI]- sum of five years' special items [Compustat item SPI]). I truncate the CASHETR to the range
ETR	=	Effective tax rate, defined as total tax expense (Compustat item TXT)/pre-tax income (Compustat PI). ETR is set as missing when the denominator is zero or negative. I truncate ETR to the range [0,1].
BTD	=	When pretax book income is positive, pre-tax income (Compustat item PI) – minority interest income (Compustat item MII) – decrease in tax loss carryforward (Compustat item TLCF) – (federal tax expense [Compustat item TXFED])/statutory tax rate (35