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Measuring Tax Aggressiveness after FIN 48: The Effect of Multinational Status, Multinational Size, and Disclosures

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ABSTRACT

Financial Accounting Standards Board Interpretation No. 48 *Accounting for Uncertainty in Income Taxes* (FIN 48) caused substantial change and controversy in the accounting and financial reporting for income taxes when it was released in 2006. This study utilizes a sample of public firms to examine the post-FIN 48 tax environment, focusing on tax aggressiveness. More specifically, this paper will (1) compare the tax aggressiveness of domestic and multinational firms, (2) investigate the relationship between tax aggressiveness and multinational size, as measured by the number of foreign jurisdictions, and (3) assess the overall quality of FIN 48-related tax footnote disclosures provided by domestic and multinational firms, and consider their role in aggressive tax planning. The results suggest that multinationals are relatively more tax aggressive than domestic firms. Some evidence indicates that larger multinationals may be more tax aggressive than smaller multinationals. And lastly, the results supported a potential inverse relationship between disclosure quality and tax aggressiveness for multinational firms.

Measuring Tax Aggressiveness after FIN 48: The Effect of Multinational Status, Multinational Size, and Disclosures

I. Introduction: Overview of FIN 48 and Tax Aggressiveness

This research measures the tax aggressiveness of domestic and multinational companies subsequent to the adoption of Financial Accounting Standards Board (FASB) Interpretation No. 48 (FIN 48)[1] in 2007. FIN 48 required the disclosure of information related to unrecognized tax benefits (UTBs) in the financial statement footnotes. Employing a sample of 47 firms, I assess whether domestic and multinational firms differ in tax aggressiveness, using multiple measures. I ask if multinational status, or the number of foreign jurisdictions the firm operates in, is associated with tax aggressiveness. I then examine the quality of each company's tax disclosures to determine whether domestic and multinational firms have different disclosing policies, and consider if disclosures with less information are an indicator of aggressive tax planning. This research is important because it provides insight into how tax regulation (FIN 48) affects business practices.

FIN 48 implemented a new two-step process to account for uncertain income taxes. In doing so, FASB intended to improve the overall quality of financial reporting by reducing the uncertainty and inconsistency of the (1) recognition and (2) measurement of tax benefits. For the recognition step, the firm considers whether the tax position is "more-likely-than-not" (>50%) to sustain an audit by the given tax authority (i.e. the Internal Revenue Service for U.S. companies). For the measurement step, the amount recognized should be the greatest benefit that is "more-likely-than-not" to be realized upon settlement. The amounts failing to meet the 50% threshold are unrecognized tax benefits. Collectively, the UTBs constitute the tax reserve – a contingent liability that may become partly or entirely due if uncertain tax positions are successfully challenged by the IRS.

FIN 48 also created several new disclosures that would require unprecedented transparency. It was this perceived vulnerability that led to a considerable amount of controversy. Many firms believed that the new disclosures, like the UTB tabular reconciliation, would help the IRS identify firms with uncertain tax positions. Thus, it would only be natural

[1] FASB Interpretation No. 48, *Accounting for Uncertainty in Income Tax Positions—An Interpretation of FASB Statement No. 109* (June 2006) (now included in Accounting Standards Codification (ASC) Subtopic 740-10).

that firms approach uncertain tax positions with caution in a post-FIN 48 world. In other words, the perceived risk of being audited could potentially cause a change in tax planning.

Many scholars have questioned whether FIN 48 has actually led to a change in tax aggressiveness. One challenge to answering this question is due to a lack of a universally accepted definition and measurement of tax aggressiveness. Many sources define "aggressive tax planning" differently. For example, Chen et al states that aggressive tax planning is the "downward management of taxable income through tax planning activities" (2010, 1). Frischman et al defines it as "engaging in significant tax positions with relatively weak supporting facts" (2008, 265). Balakrishnan et al. states that aggressive tax planning is a strategy that results in an "unusually low amount of tax given the firm's industry and size" (2011, 3). Other discussions provide more narrow definitions. Overall, despite the particular definition used, aggressive tax planning should be recognized as a relative term.

This research examines tax aggressiveness since FASB issued FIN 48. The fiscal year 2007 was used for the purposes of this study because it was the first year FIN 48 became effective. My hypotheses are discussed in Section II. A discussion of the sample selection process and research design is given in Section III. Next, Section IV will state the results derived from this research. Finally, Section V concludes this study of tax aggressiveness.

II. Description of Research Questions and Expectations

A. Multinational vs. Domestic

This study begins by investigating whether domestic or multinational status influences tax aggressiveness. Domestic companies appear to be at a disadvantage because the tax reserve relates to either U.S. or state uncertain tax positions. Thus, the IRS may be more likely to pursue an audit if the tax reserve is large. On the contrary, uncertain tax positions for multinational firms will relate to issues in foreign jurisdictions, and as a result, the reserve is not as indicative of U.S. - related UTBs. Because the tax reserve disclosures of multinationals are less likely to be useful to the IRS, multinational firms may have a lower detection risk relative to domestic firms and potentially would be more willing to engage in more aggressive tax planning than domestic firms. My first hypothesis is as follows:

H1: Multinational firms are more tax aggressive than domestic firms.

B. Multinational Firm Size

Next, I examine the relationship between multinational firm size, as measured by the number of foreign jurisdictions of the firm's subsidiaries, and tax aggressiveness. The foreign subsidiaries are listed in Exhibit 21 *Subsidiaries of the Registrant*.

Exhibit 21 *Subsidiaries of the Registrant* is required for all entities filing a 10-K. It provides a list of an entity's "significant subsidiaries" and their corresponding jurisdictions. The Securities and Exchange Commission defines a significant subsidiary in the Code of Federal Regulations (CFR) as one that meets any of the three conditions:

> (1) The registrant's and its other subsidiaries' investments in and advances to the subsidiary exceed 10 percent of the total assets of the registrant and its subsidiaries consolidated as of the end of the most recently completed fiscal year (for a proposed business combination to be accounted for as a pooling of interests, this condition is also met when the number of common shares exchanged or to be exchanged by the registrant exceeds 10 percent of its total common shares outstanding at the date the combination is initiated); or (2) The registrant's and its other subsidiaries' proportionate share of the total assets (after intercompany eliminations) of the subsidiary exceeds 10 percent of the total assets of the registrants and its subsidiaries consolidated as of the end of the most recently completed fiscal year; or (3) The registrant's and its other subsidiaries' equity in the income from continuing operations before income taxes, extraordinary items and cumulative effect of a change in accounting principle of the subsidiary exceeds 10 percent of such income of the registrant and its subsidiaries consolidated for the most recently completed fiscal year. (17 CFR 210.1-02 (w))

The number of subsidiary jurisdictions listed in Exhibit 21 gauges the physical extent of the company's operations, and thus may correspond to its ability to take aggressive uncertain tax positions.[2] My second hypothesis is as follows:

H2: Larger multinational firms are more tax aggressive than smaller multinational firms.

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[2] Initially, I thought I could use Exhibit 21 as an indication of a firm's disclosing behavior, and ultimately relate it to tax aggressiveness. But after reviewing the Exhibit 21 disclosures, it became evident that the firms were disclosing all of their subsidiaries. This was unusual because the SEC only requires that a firm disclose its "significant" subsidiaries (see above for a definition of a significant subsidiary). Because all of the firms were exercising complete voluntary disclosure, I decided that Exhibit 21 was not an appropriate tool for comparing tax aggressiveness in this study. Instead I decided to use the number of jurisdictions as a measure of size, as discussed above. Moreover, I verified my jurisdiction count with the Dyreng dataset's count of foreign jurisdictions to determine the reliability of the data to be used.

C. Disclosure Quality

FIN 48, now codified as ASC 740-10-50-15 and 50-15A, requires four annual disclosures with respect to UTBs. For public entities for each annual reporting period, ASC 740-10-50-15A(a) and (b) requires firms to disclose (1) a tabular reconciliation of the total UTBs at the beginning and end of the period and (2) the total UTBs that, if recognized, would affect the effective tax rate. Two additional disclosures are required from all firms, public and private. ASC 740-10-50-15 (c) and (d)[3] requires firms to disclose (3) the amount of interest and penalties recognized in the income statement and balance sheet, and (4) the UTBs that are reasonably expected to significantly increase or decrease within 12 months of the reporting date.[4]

In addition, firms are now required to provide "A description of tax years that remain subject to examination by major tax jurisdictions" (ASC 740-10-50-15(e)). The term "major" is not defined by FASB or the SEC. The codification contains a sample disclosure:

> The Company or one of its subsidiaries files income tax returns in the U.S. federal jurisdiction, and various states and foreign jurisdictions. With few exceptions, the Company is no longer subject to U.S. federal, state and local, or non-U.S. income tax examinations by tax authorities for years before 20X1. The Internal Revenue Service (IRS) commenced an examination of the Company's U.S. income tax returns for 20X2 through 20X4 in the first quarter of 20X7 that is anticipated to be completed by the end of 20X8. (ASC 740-10-55-217)

Considering this example, it appears that "federal," "state," and "foreign" are the minimum requirements in terms of disclosing major tax jurisdictions. Specific years for each grouping of jurisdictions also are not mandatory; instead, the sample reads: "with few exceptions… no longer subject to… examination by tax authorities before..."

After reviewing the required disclosures, firms have an opportunity to provide expanded voluntary disclosures in terms of foreign jurisdictions and open tax years. In the end, five distinct disclosure categories emerged from the sample being studied. These classifications are described in Section III below.

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[3] ASC 740-10-50-15(a) and (b) relating to the tabular reconciliation and disclosure of UTB_ETR were intentionally left out of this listing because they have been superseded by Accounting Standards Update 2009-06, which has been incorporated into ASC 740.

[4] In particular, a company must disclose the nature of the uncertainty, the event that could trigger the significant change, and either an estimated range of the reasonably possible change in unrecognized tax benefits or a statement acknowledging that an estimate cannot be made. For example, the expiration of the statute of limitations or the occurrence of other events, such as the closure of a tax examination within the next 12 months, could have a significant effect on UTBs.

Using a sample of 47 firms selected by my thesis advisor, I hand-collected the tax footnote information related to FIN 48 disclosures. It is evident that some firms disclose more information than others. The different levels of quality observed raised questions: Why are firms choosing to voluntarily disclose information? How does disclosure quality relate to aggressive tax planning? My third hypothesis is as follows:

H3: Firms with voluntary tax disclosures are less tax aggressive than firms with minimal tax disclosures.

III. Sample Selection and Research Design

A. Sample Selection

The study sample originally consisted of 58 domestic and multinational public firms selected by my thesis advisor. Companies filing Form 20-F, required by certain "foreign private issuers," were removed from the sample because they do not have to file an Exhibit 21. Certain spin-off companies were also removed because they lacked historical data. The resulting sample consisted of 10 domestic firms and 37 multinational firms. In considering the data, I recognize that there are several limitations: (1) the sample is limited in size, and (2) there is more data provided for multinationals than domestic firms.

B. Tax Aggressiveness Variables

As discussed in the introduction, the lack of a universally applied measurement for aggressive tax planning created a challenge for this study.[5] This study employs the following variables to measure aggressive tax planning: cash effective tax rate (CashETR), long-term cash effective tax rate (LRCashETR), total book-tax difference (BTD), permanent book-tax differences (PBTD), unrecognized tax benefits (UTB), and current year tax reserve increase (CYINCR). Table 1 provides definitions for these variables. With the exception of the final two, these variables were calculated using data collected from Compustat. UTBs were obtained from IRS data that my thesis advisor is using in a UTB study.

The effective tax rate (ETR), defined as some measure tax liability over income, is a common measure used in the accounting profession for tax planning. Two variations are used for

the purposes of this study – CashETR and LRCashETR. The CashETR utilizes the taxes paid by the firm over pre-tax book income. The LRCashETR provides a more stable measure than CashETR, and serves as a reinforcing measurement.

BTD is another common proxy for tax aggressiveness. This is computed as the difference between book and taxable income. Estimating taxable income is typically accomplished by grossing up current tax expense using the statutory rate. Some evidence suggests that BTDs are positively associated with tax shelters (Wilson 2009). Other studies suggest that PBTDs in particular are a good measure for aggressive tax planning. This is based on the assumption that managers prefer tax strategies that reduce income tax expense. Favorable PBTDs reduce current income tax expense without a change in deferred taxes. On the other hand, a favorable temporary BTD will reduce current tax expense, but increase deferred tax expense – resulting in no change in total income tax expense.

UTBs are associated with uncertain tax positions. Firms with more aggressive tax planning may have more uncertain tax positions than conservative firms, which suggests a direct relationship exists between reserve size and tax aggressiveness. In support, Lisowsky et al. (2011) finds evidence of a positive relation between year-end balance of the tax reserve and tax sheltering. Similarly, the CYINCR in the tax reserve provides a measure of aggressive regarding the firm's current tax planning strategies.

See Table 1

C. Tax Disclosure Variables

Multinational Status. I determined that a firm was multinational if the firm listed foreign subsidiaries on Exhibit 21 (***Status*** = yes if foreign subsidiaries listed on Exhibit 21). My sample has 10 domestic firms and 37 multinational firms.

Multinational Firm Size. I created the ***Size*** variable by counting the number of foreign jurisdictions per Exhibit 21. Table 2 provides the frequency distribution used to determine the midpoint of foreign jurisdictions to distinguish small from large multinational firms. A firm is

[5] Other variables were available to use besides those chosen (see Table 1). These variables could have been equally appropriate or perhaps even better measures of tax aggressiveness. One variable I had considered using, but ultimately rejected in favor of more common measures, was tax havens.

“small” if it has less than or equal to 13 foreign countries for the purposes of this study. A “large” multinational firm has more than 13 foreign jurisdictions.

See Table 2

Country Count. I created the ***CountryCount*** variable based on the information provided in the 10-K tax footnote. Some firms disclosed the closed foreign tax years for each foreign country. I counted the number of foreign countries listed.

Table 3 provides the Country Count for multinational firms. Of the 37 multinational firms, 20 firms did not disclose any specific foreign jurisdiction. This indicates that most firms provide limited information about foreign tax status.

See Table 3

Disclosures. I created the ***Disclosure*** variable based on the information provided in the 10-K tax footnote, including U.S. years under audit, and closed U.S. tax years.

My five classifications are as follows:

Disclosures applying to multinationals:	
M0	The disclosure met the minimum FIN 48 requirements. The major tax jurisdictions are only defined as “federal,” “state,” and “foreign.” The firms in this category do not provide names to specific foreign countries or years.
M1	In addition to the minimum requirements, the disclosure provides information about open tax years.
M2	In addition to the minimum requirements, the disclosure includes the names of specific foreign countries and/or states, as well as information concerning open tax years.
Disclosure applying to domestic firms:	
D1	The disclosure met the minimum FIN 48 requirements by listing “federal” and “state” as their major jurisdictions, but no further details.
D2	In addition to the minimum requirements, the disclosure lists specific states.

Table 4, Panel A, provides examples of the types of disclosures. Table 4, Panel B, shows how many domestic and multinational firms provided each type of disclosure. There is an increasing trend in the number of multinational firms providing more informative disclosures. Approximately 21.6% (8/37) of firms provided the minimum requirements according to FIN 48,

32.4% (12/37) chose to augment their footnotes by adding open tax years, and 46% (17/37) voluntarily disclosed specific jurisdictions and years. Based on this information, a large portion of multinationals provide higher quality disclosures. Domestic firms are split between the basic and voluntary disclosure types.

See Table 4

IV. Results

Domestic vs. Multinationals. I hypothesize that multinational firms are more tax aggressive than domestic firms (H1). Table 5 compares tax aggressiveness for domestic and multinational firms using the means of the tax aggressiveness variables. The t-statistic was computed to determine the significance of the difference between these means. Those mean differences for which the t-statistic was greater than positive or negative 2.00 were considered to be statistically significant. The mean differences for CashETR, LRCashETR, BTD and PBTD did not meet the t-statistic threshold. However, the UTB and CYINCR differences are statistically significant; the multinationals showed overall larger tax reserves and current year increases. All in all, there is some support for my hypothesis that multinational firms are more tax aggressive than domestic firms.

See Table 5

I hypothesize that larger multinational firms are more tax aggressive than smaller multinational firms (H2). Table 6 provides a comparison of small and large multinational firm tax aggressiveness. CashETR was statistically significant, but did not support my hypothesis that large multinational firms had more tax aggressive planning. LRCashETR, BTD, and PBD mean differences were did not meet the t-statistic threshold for significance. But the UTB and CYINCR mean differences were statistically significant, and did support my hypothesis.

See Table 6

Disclosures. I hypothesize that firms with voluntary tax disclosures are less tax aggressive than firms with minimal tax disclosures (H3). Table 7 examines the tax aggressiveness associated with each disclosure type for multinational firms. The mean differences for CashETR and LRCashETR increase as the quality of disclosure increases from type M0 to M2. These measures are statistically significant, and support my hypothesis that more tax aggressive firms provide less informative footnotes. BTD and PBTD were also significant. The BTD and PBTD measures were greater overall for firms with lower levels of disclosure, demonstrating that they may be more tax aggressive. The UTB and CYINCR mean differences were statistically insignificant.

See Table 7

The same information was compiled for the domestic disclosures (D1 and D2). However, there were no significant differences based on type of disclosure. This result suggests that informative disclosures may not be an indicator of tax aggressiveness for domestic firms.

V. Conclusion

My results suggest that multinational and domestic firms behave differently in a post-FIN 48 tax environment. My first hypothesis that multinational firms may be more aggressive than domestic firms was supported by some evidence. In this case, the UTB and CYINCR variables seemed to be more useful for measuring tax aggressiveness. The results concerning my second hypothesis, comparing multinational firm size and tax aggressive planning, were also mixed. Again, the UTB and CYINCR variables were significant and supported my hypothesis. The CashETR measure was interesting because it was statistically significant, but contradicted my hypothesis. Because the median was not dramatically different from the mean, this result was not likely to have been caused by an outlier. Further research or a larger sample would be necessary to examine the source of this relationship and to determine whether a revision of my hypothesis would be appropriate.

Lastly, my research did provide some support for my third hypothesis. For multinationals, it appeared as though there was an inverse relationship between disclosure quality and tax aggressiveness, as expected. The CashETR, LRCashETR, BTD, and PBTD

variables all provided significant support in this case. On the contrary, the results as a whole for domestic disclosures were not significant. This may be because tax aggressiveness is not related to disclosure quality for domestic firms. Otherwise, the results may have been affected by the sample size, and a larger sample would be necessary.

The results of my research suggest the need for further investigation into the subject. Employing additional variables may be particularly helpful in cases where mixed results were found. Given more time, I would have liked to expand the sample to include more firms. The domestic dataset ended up being particularly narrow and this places limitations on the study's results. Increasing the scope of the sample would have provided a broader and more accurate perspective of the disclosing policies and aggressive tax planning.

Table 1
Tax Aggressiveness Variable Definitions

Variable Name	Definition
CashETR	The cash effective tax rate calculated as cash taxes paid (*TXPD)* in year *t* divided by pre-tax book income in year *t* (*PI*) less special items (*SPI*);
LRCashETR	The five year average cash effective tax rate calculated as the five year sum of cash taxes paid (*TXPD*) divided by the five-year sum of pre-tax book income (*PI*) less special items (*SPI*);
BTD	Total book tax differences computed as the difference between book income (*PI)* less minority interest (*MII*) and an estimate of taxable income. Taxable income is estimated by grossing up the sum of federal tax expense (*TXFED*) and foreign tax expense (*TXFO)* by the statutory rate and then subtracting the change in the net operating loss (*TCLF*) from year *t-1* to year *1*. *BTD* is scaled by beginning of the year total assets (*AT*);
PBTD	Permanent book tax differences computed as the difference between total book tax differences (*BTD*) and temporary book tax differences [Computed by grossing up deferred tax expense (*DTE*) by the statutory rate];
UTB	Unrecognized tax benefits, more commonly known as the tax reserve for uncertain tax positions; Calculated as the balance at the end of year divided by total assets at the beginning of the year (AT)
CYINCR	Current year addition to the tax reserve; this amount is divided by total assets at the beginning of the year (AT)

Compustat variable names are reported in parentheses.

Table 2
Small versus Large Multinational Firms

ncountries	Frequency	%	Cum. %
1	1	2.78	2.78
2	3	8.33	11.11
3	2	5.56	16.67
5	1	2.78	19.44
6	1	2.78	22.22
7	3	8.33	30.56
8	1	2.78	33.33
9	1	2.78	36.11
11	1	2.78	38.89
13	3	8.33	47.22
18	3	8.33	55.56
23	2	5.56	61.11
25	1	2.78	63.89
27	1	2.78	66.67
32	1	2.78	69.44
33	1	2.78	72.22
37	1	2.78	75
38	1	2.78	77.78
40	1	2.78	80.56
41	1	2.78	83.33
44	1	2.78	86.11
49	1	2.78	88.89
59	1	2.78	91.67
64	1	2.78	94.44
81	1	2.78	97.22
110	1	2.78	100
Total	36	100	

Ncountries refers to number of foreign jurisdictions represented on Exhibit 21.
Ncountries<=13 are small.
Ncountries>13 are large.

Table 3

Number of Foreign Countries Listed in 10-K Tax Footnotes (Country Count)

	Multinational Status		
Country Count	**No**	**Yes**	**Total**
0	10	20	30
1		1	1
2		3	3
3		4	4
4		3	3
5		2	2
6		1	1
9		1	1
11		2	2
Total	10	37	47

Table 4
Disclosure Quality

Panel A, Examples of Disclosures

Disclosures applying to multinationals:	
M0	The disclosure met the minimum FIN 48 requirements. The major tax jurisdictions are only defined as “federal,” “state,” and “foreign.” The firms in this category do not provide names to specific foreign countries or years.
M1	In addition to the minimum requirements, the disclosure provides information about open tax years. An example of an M1 disclosure: *We file a U.S. federal income tax return and income tax returns in various states and foreign jurisdictions. With few exceptions, we are no longer subject to income tax examinations for years before 1998* (Target Corp).
M2	In addition to the minimum requirements, the disclosure includes the names of specific foreign countries and/or states, as well as information concerning open tax years. An example a 2007 M2 disclosure: *We conduct business globally and, as a result, UTC or one or more of our subsidiaries file income tax returns in the U.S. federal jurisdiction and various state and foreign jurisdictions. In the normal course of business, we are subject to examination by taxing authorities throughout the world, including such major jurisdictions as Australia, Canada, China, France, Germany, Hong Kong, Italy, Japan, Korea, Singapore, Spain, the United Kingdom and the United States. With few exceptions, we are no longer subject to U.S. federal, state and local, or non-U.S. income tax examinations for years before 1998* (United Technologies Corp).
Disclosure applying to domestic firms:	
D1	The disclosure met the minimum FIN 48 requirements by listing “federal” and “state” as their major jurisdictions, but no further details.
D2	In addition to the minimum requirements, the disclosure lists specific states. An example of a D2 disclosure: *The Company has identified its federal tax return and its state tax returns in California and Texas as “major” tax jurisdictions, as defined. The only periods subject to examination for the Company’s federal tax returns are the 2005 and 2006 tax years. The periods subject to examination for the Company’s state tax returns in California and Texas are years 2002 through 2006* (Southwest Airlines).

Table 4 (cont'd)

Panel B, Domestic and Multinational Status, and Type of Disclosure Trends

Type of Disclosure	**Multinational Status**		
	N	**Y**	**Total**
M0		8	8
M1		12	12
M2		17	17
D1	5		5
D2	5		5
Total	10	37	47

Table 5
Domestic versus Multinational Tax Aggressiveness

Variable	N	Mean	SD	p25	p50	p75	Diff	t-statistic
Domestic								
CashETR	9	0.366	0.277	0.287	0.344	0.425	0.111	1.86
LRCashETR	8	0.228	0.109	0.154	0.248	0.305	-0.007	-0.18
BTD	9	0.015	0.022	0.001	0.007	0.02	-0.015	-0.87
PBTD	9	0.005	0.007	0.002	0.004	0.011	-0.022	-1.52
UTB	9	0.005	0.005	0.002	0.005	0.006	-0.012*	-2.44
CYINCR	9	0	0.001	0	0	0	-0.002*	-2.43
Multinational								
CashETR	34	0.255	0.114	0.184	0.275	0.339		
LRCashETR	26	0.235	0.089	0.183	0.228	0.304		
BTD	35	0.031	0.051	0.008	0.025	0.041		
PBTD	35	0.027	0.043	0.002	0.017	0.052		
UTB	37	0.017	0.014	0.007	0.014	0.023		
CYINCR	34	0.002	0.002	0.001	0.002	0.003		

See Table 1 for variable definitions.
N is the number of firms for which data was collected.
SD is the standard deviation.
Diff is the difference between means.
*p<0.05, **p<0.01, ***p<0.001

Table 6
Multinational Firm Size and Tax Aggressiveness

Size	Variable	N	Mean	SD	p25	p50	p75	Diff.	t-statistic
Small	CashETR	16	0.209	0.127	0.115	0.242	0.308	-0.0887*	(-2.36)
	LRCashETR	12	0.22	0.113	0.165	0.227	0.303	-0.0297	(-0.81)
	BTD	16	0.036	0.068	0.009	0.027	0.042	0.0108	0.6
	PBTD	16	0.023	0.053	-0.001	0.012	0.035	-0.00784	(-0.51)
	UTB	17	0.011	0.014	0.004	0.008	0.013	-0.0110*	(-2.51)
	CYINCR	15	0.001	0.001	0	0.001	0.002	-0.0021**	(-2.75)
Large	CashETR	17	0.297	0.086	0.248	0.309	0.346		
	LRCashETR	13	0.249	0.066	0.188	0.271	0.304		
	Total BTD	18	0.025	0.032	0.008	0.021	0.041		
	PBTD	18	0.031	0.036	0.005	0.026	0.056		
	UTB	19	0.022	0.012	0.015	0.021	0.031		
	CYINCR	18	0.003	0.003	0.001	0.002	0.004		

See Table 2 for definition of small and large firm size.
See Table 1 for variable definitions.
N is the number of firms for which data was collected.
SD is the standard deviation.
Diff is the difference between means.
*p<0.05, **p<0.01, ***p<0.001

Table 6
Multinational Disclosures and Tax Aggressiveness

Disclosure Type	Variable	N	Mean	SD	p25	p50	p75	Diff.	t-statistic
M0	CashETR	8	0.138	0.099	0.053	0.15	0.213	-0.184***	(-4.99)
	LRCashETR	5	0.116	0.08	0.067	0.146	0.183	-0.163***	(-4.26)
	BTD	8	0.072	0.075	0.024	0.033	0.106	0.0634*	2.69
	PBTD	8	0.052	0.055	0.008	0.037	0.106	0.0424*	2.16
	UTB	8	0.018	0.019	0.007	0.011	0.023	0.00265	0.48
	CYINCR	7	0.003	0.003	0.001	0.002	0.003	0.000941	0.9
M2	CashETR	14	0.321	0.073	0.294	0.323	0.349		
	LRCashETR	11	0.279	0.067	0.211	0.304	0.336		
	BTD	15	0.008	0.04	-0.018	0.012	0.029		
	PBTD	15	0.01	0.039	-0.008	0.009	0.034		
	UTB	17	0.015	0.009	0.006	0.016	0.021		
	CYINCR	16	0.002	0.002	0.001	0.001	0.002		

See Table 4 for definition of disclosure MO and M2.
See Table 1 for variable definitions.
N is the number of firms for which data was collected.
SD is the standard deviation.
Diff is the difference between means.
*p<0.05, **p<0.01, ***p<0.001

References

Balakrishnan, Karthik, Jennifer Blouin, and Wayne Guay. 2011. Does Tax Aggressiveness Reduce Financial Reporting Transparency? Working paper. *Social Science Research Network.* Web. 01 Apr. 2012. <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=647604>.

Chen, S., X. Chen, Q. Cheng, and T. Shevlin. 2010. Are family firms more tax aggressive than non-family firms? *Journal of Financial Economics* 95: 41-61.

Frischmann, P. J., T. Shevlin, and R. Wilson. 2008. Economic Consequences of Increasing the Conformity in Accounting for Uncertain Tax Benefits. *Journal of Accounting & Economics* 46 (2-3): 261-278.

Lisowsky, Petro, Leslie A. Robinson, and Andrew Schmidt. 2009. Do Publicly Disclosed Tax Reserves Tell Us About Privately Disclosed Tax Shelter Activity? Tuck School of Business Working Paper No. 2009-73. *Social Science Research Network*. Web. 01 Apr. 2012. <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1481488>.

Wilson, Ryan J. 2009. An Examination of Corporate Tax Shelter Participants. *The Accounting Review*, 84(3): 969-999. *ABI/INFORM.* Web. 01 Apr. 2012.