

Online Appendix for

IRS Attention
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1. Additional Tests of IRS Attention

1.1 IRS Attention and Tax-related Outcomes

To further explore our proxy of IRS attention, we examine whether increases in our proxy of *IRS ATTENTION* are associated with subsequent tax enforcement actions taken by the IRS. Specifically, we examine whether current-year values of *IRS ATTENTION* are associated with one-year-ahead tax settlements and references to a tax authority or IRS audit in the firm's 10-K. The model is specified as follows:

$$\begin{aligned} TAX\ ACTIVITY_{i,t+1} = & \alpha_{FE} + \beta_I\ IRS\ 10\text{-K}\ DOWNLOADS_i + B_2\ TAX\ ACTIVITY_{i,t} \\ & + B_K\ CONTROLS_{i,t} + \varepsilon_{i,t+1}. \end{aligned} \quad (A1)$$

where *TAX ACTIVITY* represents either *SETTLEMENT*, which is measured as an indicator variable equal to one if a firm disclosed a decrease in their UTB balance related to settlements with a tax authority, or *TAX AUDIT REFERENCE*, which is measured as an indicator equal to one if the firm made reference to a tax audit in their 10-K footnotes and zero otherwise.^{1,2} If we observe $\beta_I > 0$ when estimating equation (A1), it would suggest a positive association between current IRS attention and subsequent firm tax-enforcement consequences.

We present the results of estimating equation (A1) below. In Column 1, we find evidence to suggest that current IRS attention is positively associated with future tax settlements with tax authorities. In Column 2, we find evidence to suggest that current IRS attention is positively associated with a firm's future propensity to discuss a tax audit in its tax footnote. In these analyses, industry fixed effects are included to be consistent with later tests, but the results (untabulated) are

¹ We look for references to an IRS audit by identifying several audit related words (“audit”, “exam”, “investig”, or “inspect”) required to be within 20 characters of “IRS”, “I.R.S.”, or “Internal Revenue Service”. We eliminate cases where the text refers to not being audited, the firm is no longer subject to audits, or the possibility of being audited.

² To ease interpretation, we follow Hanlon and Hoopes (2014) and estimate Equation (2) using a linear probability model (LPM). The use of LPM does not induce bias or inconsistency on the coefficients or standard errors, whereas potential bias may exist using firm fixed effects and non-linear models operationalized using MLE (Greene 2011). We also verify that inference are similar using a nonlinear model with a limited number of fixed effects.

also robust to including firm fixed effects, which should capture time-invariant firm characteristics (e.g., constant audit status).

While we do not claim a causal relation between current IRS attention and future tax outcomes, these results help assure that our proxy that uses 10-K downloads captures IRS attention in a meaningful way.

Table A1
Results of IRS Attention

<i>DEPENDENT VARIABLE</i>	<i>SETTLEMENT_{t+1}</i>	<i>TAX AUDIT REFERENCE_{t+1}</i>
<u>VARIABLE</u>	<u>Column 1</u>	<u>Column 2</u>
<i>IRS 10-K DOWNLOADS</i>	0.036*** (9.38)	0.015*** (3.57)
<i>SETTLEMENT</i>	0.314*** (28.90)	
<i>TAX AUDIT REFERENCE</i>		0.701*** (71.97)
<i>FIRM CONTROLS INCLUDED</i>	<i>YES</i>	<i>YES</i>
<i>INDUSTRY FIXED EFFECTS</i>	<i>YES</i>	<i>YES</i>
<i>YEAR FIXED EFFECTS</i>	<i>YES</i>	<i>YES</i>
<i>S.E. CLUSTERED BY:</i>	<i>FIRM</i>	<i>FIRM</i>
<i>OBSERVATIONS</i>	11,230	10,616
<i>ADJUSTED R²</i>	0.399	0.535

This table presents the results of OLS regressions of two tax outcomes in year $t+1$ on *IRS 10-K DOWNLOADS*. *IRS 10-K DOWNLOADS* is the number of EDGAR downloads of 10-K documents from an IRS owned IP address in year t . *SETTLEMENT_{t+1}* is an indicator coded to equal one if the firm disclosed a tax settlement greater than zero (TXTUBSETTLE) in their annual FIN 48 reconciliation in year $t+1$. *TAX AUDIT REFERENCE_{t+1}* is an indicator coded to equal one if the word "audit" appears in the firm's 10-K within 20 characters of a reference to a list of tax-related words including "tax," "IRS," and "authority" in $t+1$. *IRS 10-K DOWNLOADS* is the log of one plus the number of times during year t that an individual with an IRS IP address downloaded any 10-K from EDGAR for firm i . The sample period covers 2007-2014. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

1.2 IRS Attention by Fama-French Industry

Table A2
Top 10 Industries by Number of 10-K Downloads
2007-2014

Fama-French Industry	Total IRS 10-K Downloads
Software	16,985
Pharmaceutical Products	14,243
Retail	13,837
Electronic Equipment	13,280
Machinery	10,187
Wholesale	9,812
Petroleum & Natural Gas	9,601
Business Services	9,544
Telecommunications	7,299
Hardware	6,460

This table presents the number of *IRS 10-K DOWNLOADS* (unscaled, unlogged raw count) by industry for the ten most downloaded industries using the Fama-French 49 industry classification system.

1.3 Top 40 Firms with Most IRS Attention

Table A3
Top 40 Firms with Most IRS Attention

<u>RANK</u>	<u>COMPANY</u>	<u># DOWNLOADS</u>	<u>AVG ETR</u>
1	ABBOTT LABORATORIES	1070	16.03%
2	MICROSOFT CORP	1047	23.55%
3	INTL BUSINESS MACHINES CORP	831	23.82%
4	HEWLETT-PACKARD CO	788	20.86%
5	JOHNSON & JOHNSON	775	20.50%
6	XEROX CORP	749	19.51%
7	AT&T INC	749	28.52%
8	CATERPILLAR INC	727	23.23%
9	HILLSHIRE BRANDS CO	725	33.71%
10	AMGEN INC	711	12.54%
11	BOEING CO	703	28.29%
12	BERKSHIRE HATHAWAY	665	29.75%
13	PROCTER & GAMBLE CO	652	25.49%
14	WAL-MART STORES INC	646	32.70%
15	CAMERON INTERNATIONAL CORP	628	24.77%
16	MONDELEZ INTERNATIONAL INC	610	21.65%
17	ELECTRONIC ARTS INC	577	8.73%
18	VALERO ENERGY CORP	555	44.97%
19	DELL INC	550	22.16%
20	DU PONT (E I) DE NEMOURS	540	19.51%
21	CONOCOPHILLIPS	529	45.91%
22	ALTRIA GROUP INC	519	34.55%
23	AMAZON.COM INC	503	38.49%
24	GOOGLE INC	503	21.90%
25	PEPSICO INC	499	25.30%
26	SYMANTEC CORP	491	21.89%
27	CONAGRA FOODS INC	478	34.71%
28	NEWMONT MINING CORP	475	25.25%
29	PALL CORP	464	28.24%
30	PFIZER INC	462	20.73%
31	APPLE INC	458	27.24%
32	ECOLAB INC	458	29.86%
33	VERIZON COMMUNICATIONS INC	439	15.28%
34	CVS HEALTH CORP	438	38.95%
35	AMERICAN AXLE & MFG HOLDINGS	433	3.90%
36	DEERE & CO	431	34.84%
37	ALLERGAN INC	428	35.29%
38	STARWOOD HOTELS&RESORTS WRLD	419	18.62%
39	OCCIDENTAL PETROLEUM CORP	415	47.08%
40	MGM RESORTS INTERNATIONAL	411	34.95%

This table presents firm name, count of *IRS 10-K DOWNLOADS* (unscaled, unlogged raw count), and average ETR for the 40 firms whose financial statements were downloaded most by the IRS during our sample period.

2. Validating IRS EDGAR Downloads

2.1 Detailed Description of Data Gathering Process

An important challenge we face is correctly identifying IRS-owned IP addresses. Organizations often buy large blocks of IP addresses to support their many users, and for these blocks, there is little ambiguity in identifying their owners. We use a ‘whois’ command line tool to query online sources to identify organizations that own specific IP addresses based on the American Registry for Internet Numbers (ARIN). We in turn use these data to identify IP addresses specifically owned by the Internal Revenue Service. Note that any person can verify these IP addresses using online databases.³ We then match these addresses to the SEC’s EDGAR data. While the SEC truncates the final octet of the IP address, they also provide a unique identifier for each IP address, replacing the final octet of the IP address with a unique letter combination (i.e., 123.456.789.XYZ). In our sample of downloads, EDGAR records activity from twelve unique IP address owned by the IRS, all of which come from IPs that are geographically located in the Washington DC area. We emphasize, however, despite the fact that we observe EDGAR downloads from only twelve IP addresses that are all geographically similar, this fact does not suggest activity from only twelve individuals, for the following reasons.

First, for obvious reasons, information security at the IRS is critical. Revenue agents are asked to connect to the internet using either i) a hard-wired IRS connection while in the office (IRM 10.8.40, IRM 10.8.26), which in turn likely uses VPN, ii) an aircard which provides secure internet access (IRM 10.8.40, IRM 10.8.26),⁴ or iii) a wireless connection combined with a virtual private network or VPN (IRM 10.8.40, IRM 10.8.26). The way the IRS allows employees to access to the internet or internal IRS resources will result in far fewer IP addresses being used than

³ See, for example, <https://db-ip.com/all/152.216.11>

⁴ The IRS has issued tens of thousands of aircards: http://www.treasury.gov/tigta/press/press_tigta-2013-05.htm

computers exist, with many computers being routed through a single IP address.⁵ This practice is common for large organizations and entities; for example, at one point, the entire population of Qatar appeared to use the same IP address (BBC 2007).

Second, the sheer volume and diversity of downloads from the twelve IP addresses makes it very unlikely that these come from a single user. Some of the IP addresses in our sample have over 100,000 downloads in our sample period representing over 100 distinct form types downloaded. This type of downloading behavior seems unlikely if one person is behind each IP address.

Third, the SEC records, for a large portion of downloads, the web browser used to access filings is recorded in the EDGAR data. The IRS generally requires that employees use Internet Explorer (IE), and IRS employees have very little ability to install alternative browsers (or software of any kind) on their computers. As another check that the downloads we are examining are IRS downloads, we examine what web browsers were used to access the SEC filings. Of the downloads we attribute to the IRS that have a non-missing browser variable in the EDGAR data, 99.9983% are performed using IE (there are a total of 3 non-IE downloads). In the EDGAR population of the 651 million downloads where a browser is recorded, only 87% use Internet Explorer. That the downloads we examine are almost exclusively done using Internet Explorer lends credence to our assertion that we are correctly able to attribute these downloads to IRS computers.

Considering the foregoing discussion, we wish to caveat several features of the EDGAR IRS data. First, neither the IRS nor the SEC has provided us the identification data used to identify EDGAR downloads as coming from the IRS. Second, we rely on a proprietary outside source to verify that the IRS's EDGAR download activity is indeed derived from IP addresses owned by the

⁵ This is a common form of routing, called static network address translation (NAT), which routes many users through a single IP address. IRS documentation shows that the IRS advocates the use of NAT (IRS 2014, 103).

IRS. Third, this proprietary source is made up of current IP ownership assignments—to the extent that IP ownership has varied during the sample period, these data are inaccurate (this is unlikely for block purchases of IP addresses, and, for example, websites such as <http://whois.arin.net/rest/net/NET-152-216-0-0-1> indicate that the IRS has owned its current IP blocks since 1991). Fourth, the IP ownership data are a partial mapping of IP ownership to IP addresses since there are likely many IP addresses owned by the IRS and other government agencies that we do not capture. As a result, we are only referring to IRS attention from locations that we are able to positively identify as being associated with the IRS. Finally, to the extent that IRS users save downloaded files to use offline, that they receive them directly from the firm as part of the audit, or that they have access to these data from other external sources (such as company websites) or from internal databases (as suggested in Lisowsky et al (2013), our estimates will be biased downward. Therefore, our data represent a lower bound assessment of IRS attention to financial statements.

2.2 IRS Attention by Geography

In this section, we use information about the time of download to provide evidence that the downloads from the IRS IP addresses are not from the same individuals, and are not by people physically located in Washington DC. Take the following example. Imagine firms in Seattle, Salt Lake, Chicago and New York are all being audited by the IRS revenue agents located in their respective city.⁶ These cities are in the Pacific, Mountain, Central, and Eastern Time zones, respectively. Further, assume that revenue agents show up for work at 8AM their local time, begin

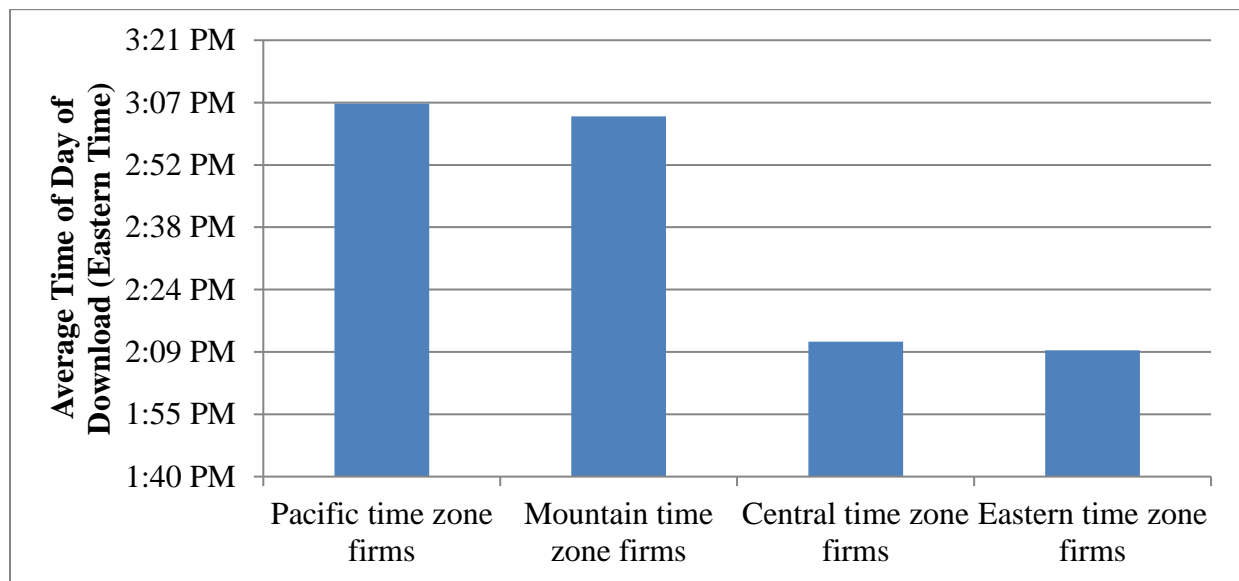
⁶ Unless specialists are needed, firms are generally audited by revenue agents geographically proximate to them. Indeed, §301.7605-1 (d)(1) indicates that “The Service generally will make an initial determination of the place for an examination, including the Internal Revenue Service district to which an examination will be assigned, based upon the address shown on the return for the period selected for examination.” Further, §301.7605-1 (d)(2)(i) suggests that “An office examination of an individual or sole proprietorship generally is based on the residence of the individual taxpayer”, and §301.7605-1 (d)(3)(i) notes that “A field examination will generally take place at the location where the taxpayer's original books, records, and source documents pertinent to the examination are maintained.”

working, and the first task they perform is to download a 10-K for a firm they are currently auditing. EDGAR records the download in what we will call EDGAR time, which is the same as Eastern Time. Therefore, while the auditors download at 8AM their local time, their downloads will be recorded in EDGAR time at 11AM for Seattle, 10AM for Salt Lake, 9AM for Chicago, and 8AM for New York.

Clearly IRS agents do not download all the 10-Ks for their cases at 8AM. However, if individuals geographically proximate to the firms they are examining are those completing the downloads of 10-Ks, we would still expect to see downloads from more Pacific time zone agents/firms having average download times that, recorded in EDGAR time, are later in the day on average. This claim is empirically demonstrable with the EDGAR data. To do so, we group firms by the time zones of their corporate headquarters and then calculate the average download time of forms downloaded for those firms, which is depicted in Figure A1. That firms located in more westerly time zones are downloaded, on average, later in the day (when recorded in eastern time) suggests that downloads of firms seem to be more likely to be coming from people located in the same time zone as the firm. This empirical regularity provides further evidence that the activity we study is not a small number of users with IP addresses near or in Washington DC. Rather, the data suggest that the downloads are completed by individuals geographically proximate to the firms of interest.

Figure A1

Average download time of forms, grouped by time zone of firm



2.3 Comparing Aggregate Public IRS Data to IRS EDGAR Download Data

In this section, to further validate our measure of IRS Attention, we compare our measure with aggregated data released by the IRS regarding the percentage of firms are audited. In its annual Databook, the IRS releases aggregated statistics on IRS audits, documenting the percentage of corporations audited in a given year (*IRS Audit Probability*), aggregated by the size of the firm.⁷ In Figure A2, Panels A-D, we graph the percentage of firms that were audited in the four largest asset size categories (*IRS Audit Probability*), and the percentage of firms in those categories that had at least one 10-K downloaded by an IRS owned IP address (*IRS Attention*) for those same asset size categories. We graph only these four asset size categories to conserve space, and because the vast majority of public firms fall in these asset size categories (Hoopes et al. 2012). We graph

⁷ These Databooks are available here: <http://www.irs.gov/uac/SOI-Tax-Stats-IRS-Data-Book>. This data has been used previously as a measure of the likelihood of an IRS audit [Guedhami and Pittman 2008; Hoopes et al. 2012; Hanlon et al. 2014b; El Ghoual et al. 2011].

2004-2006, because, as noted in the paper, FIN 48 brought about a large shift in how the IRS used 10-Ks, and, as also noted in the paper, FIN 48 resulted in the vast majority of firms having their 10-Ks downloaded at least once in some of the post-FIN 48 period (although there was large variance in the number of times downloaded, even in the FIN 48 period).

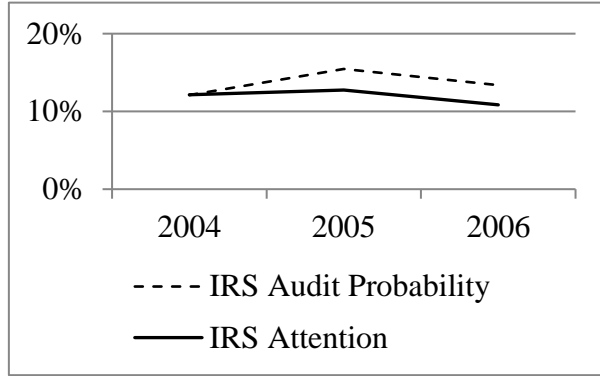
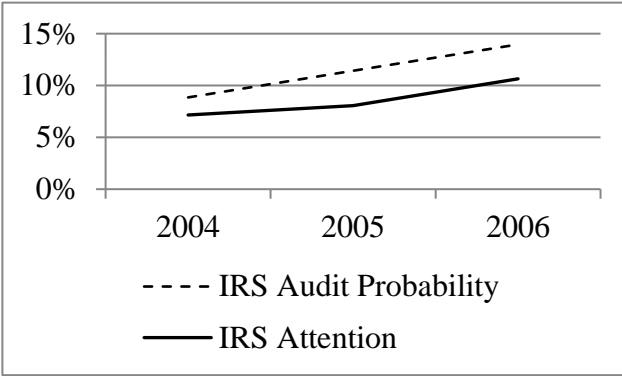
The *IRS Audit Probability* is strikingly similar to *IRS Attention*. For example, for firms between \$50 and \$100 million in assets, in Panel B, 12% of returns were audited in 2004, 15% in 2005, and 13% in 2006. In contrast, for those same years in the same size bin, 12%, 13% and 11% of firms had at least one 10-K downloaded. From 2004-2006, the *IRS Audit Probability* and *IRS Attention* are very similar, adding confidence to our measure of IRS attention as being meaningfully representing IRS activity.

Figure A2

Comparing IRS EDGAR Downloads to IRS Audit Probability

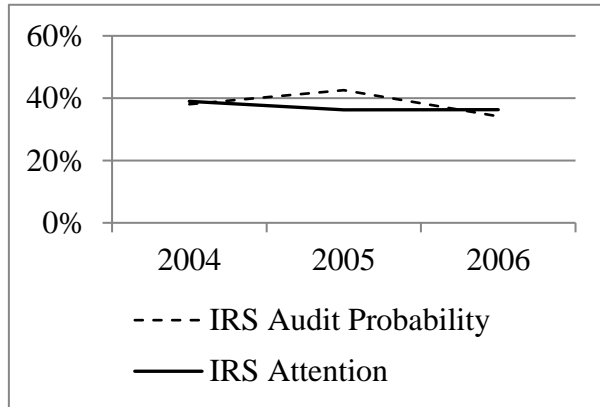
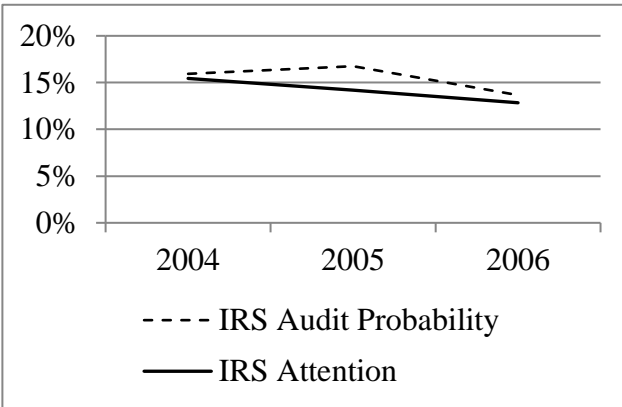
Panel A. Assets Between 10M and 50M

Panel B. Assets Between 50M and 100M



Panel C. Asset Between 100M and 250M

Panel D. Assets Over 250M

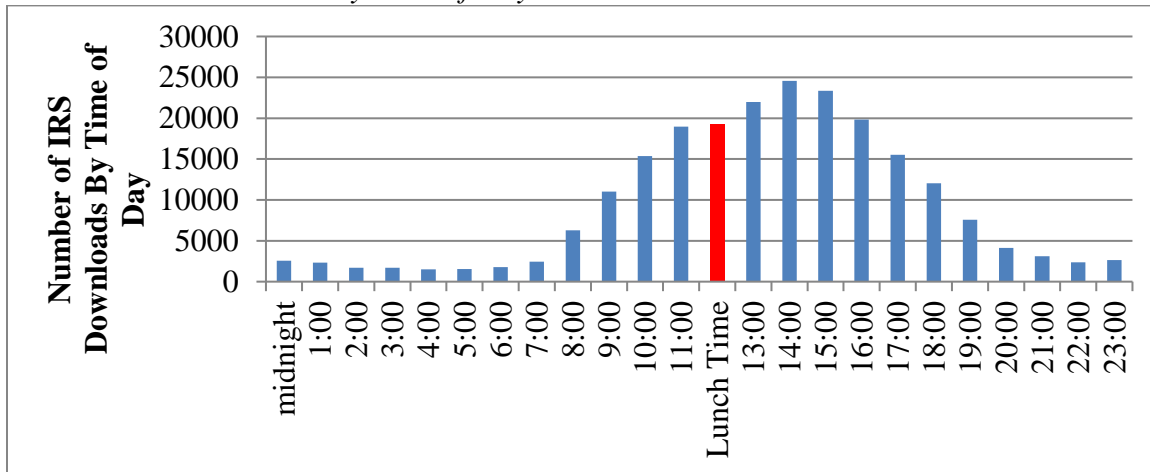


2.4 Patterns in Daily and Weekly IRS Attention

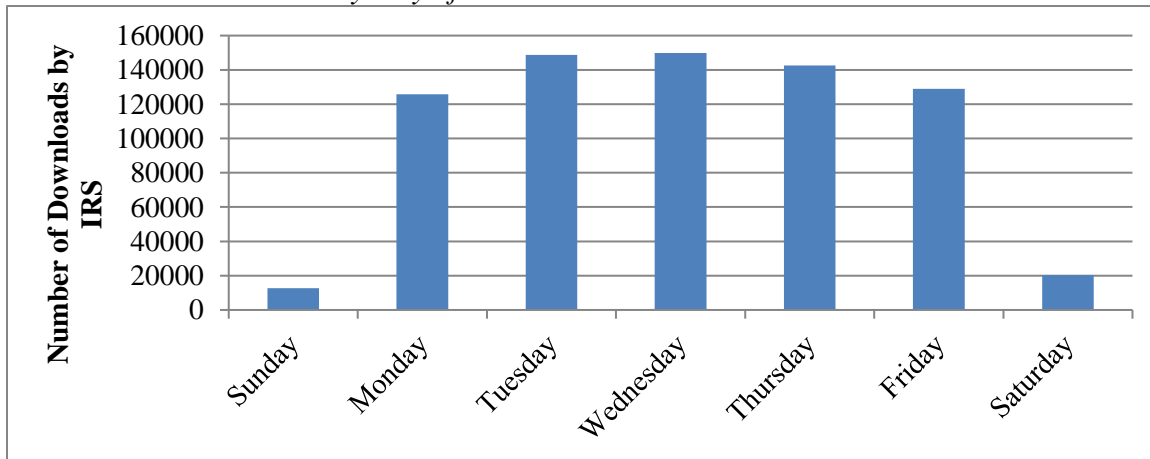
Next, we examine when during the day, and when during the week, IRS downloads occur. Figure A3, Panel A, suggests that most downloads occur between the hours of 8 a.m. and 5 p.m. (all times Eastern). Figure A3, Panel B plots IRS search volume by day of the week and shows that nearly all downloads happen during the work week (i.e., Monday through Friday). Taken together, these two figures suggest we are capturing agent downloads of EDGAR filings, as opposed to automated downloads, or downloads by users with more flexible work hours.

Figure A3
Timing of IRS Downloads

Panel A: IRS Downloads by Time of Day



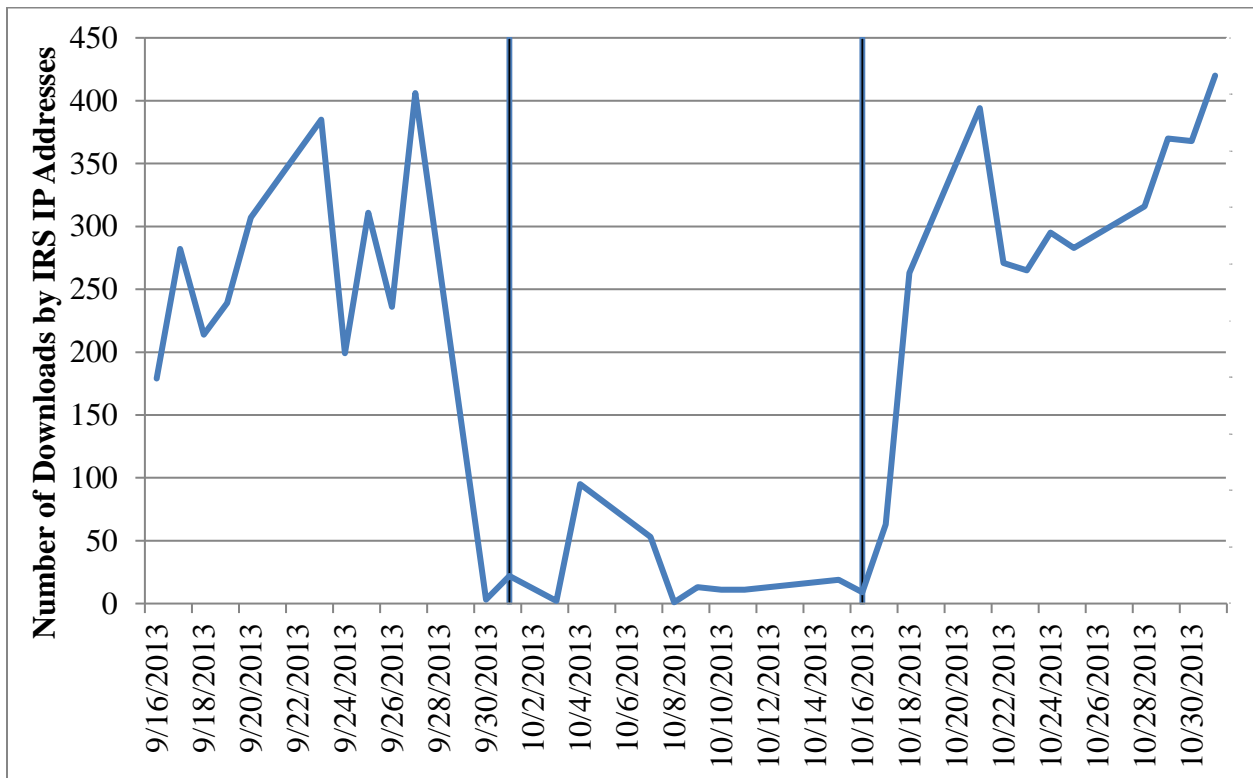
Panel B: IRS Downloads by Day of the Week



2.5 IRS Attention during 2013 Government Shutdown

Next, we take advantage of the unique setting of the government shutdown in 2013 to provide additional evidence that the download activity we are capturing is indeed that of IRS agents. From October 1 to October 16, 2013, the U.S. government was shut down, and IRS agents were told that they were not to use IRS facilities or equipment, or work at all, during the shutdown. Figure A4 shows the total number of IRS downloads during this shutdown period (the period between the black lines). Download activity is clearly suppressed, adding further credibility to our claim that these downloads do represent IRS downloads.

Figure A4
IRS Downloads Around Government Shutdown

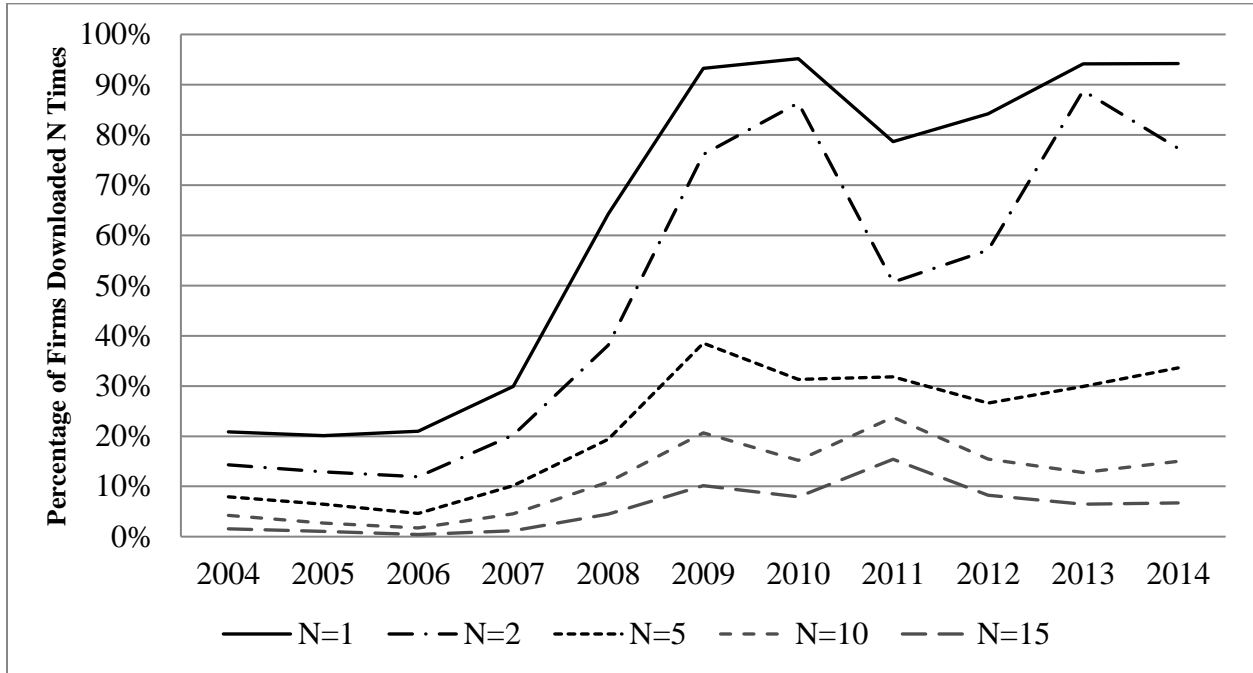


2.6. Number of Firms Downloaded N Times

As mentioned previously, the pattern of IRS downloads changes dramatically after FIN 48, suggesting that the IRS reviews FIN 48 disclosures. The IRS systematically collects financial accounting information for research purposes, especially FIN 48 related information. However, it is unclear to what extent this information is used in the IRS's enforcement mission. In order to ensure that we are not merely documenting the IRS's database-building of FIN 48 information for their research purposes, we graphically examine the download intensity across years and examine the percentage of firms that are downloaded more than N times.

In Figure A5, as one would expect if the IRS is using FIN 48 information, the number of firms downloaded more than 0 times dramatically increases after FIN 48. This would, however, also be consistent with downloading of 10-Ks for research purposes. However, the number of firms downloaded at least 2, 5, 10, and 15 times also increases substantially after FIN 48, in percentage terms. While one can imagine one or two downloads being required for IRS database building, it is hard to conceive why the same 10-K would need to be downloaded 20 times in order to extract FIN 48 information for database building purposes. That the increase in IRS downloads post-FIN 48 is not merely concentrated in firms that were downloaded a single time is consistent with 10-K information being used for more than mere database building purposes.

Figure A5
Percentage of Firms That Get Downloaded at Least N Times



3. Robustness Tests

3.1. 10-K Downloads by the IRS and the Top 5 Other Government Users

In this section, we repeat analyses similar to those found in Section 4 of the manuscript, but we use other governmental attention to Form 10-K instead of IRS attention to Form 10-Q as a counterfactual group. Specifically, we focus on a constant sample of the five governmental entities that downloaded the greatest number of 10-Ks over the sample period: the U.S. Bureau of Census, U.S. Department of Justice, California State Franchise Tax Board, Fannie Mae, and the Federal Trade Commission. Figure A6 replicates Figure 2 from the manuscript, but using the 10-K downloads from these government entities as the alternative control group.

Figure A6
10-K Downloads by Year for IRS and Other Government Entities

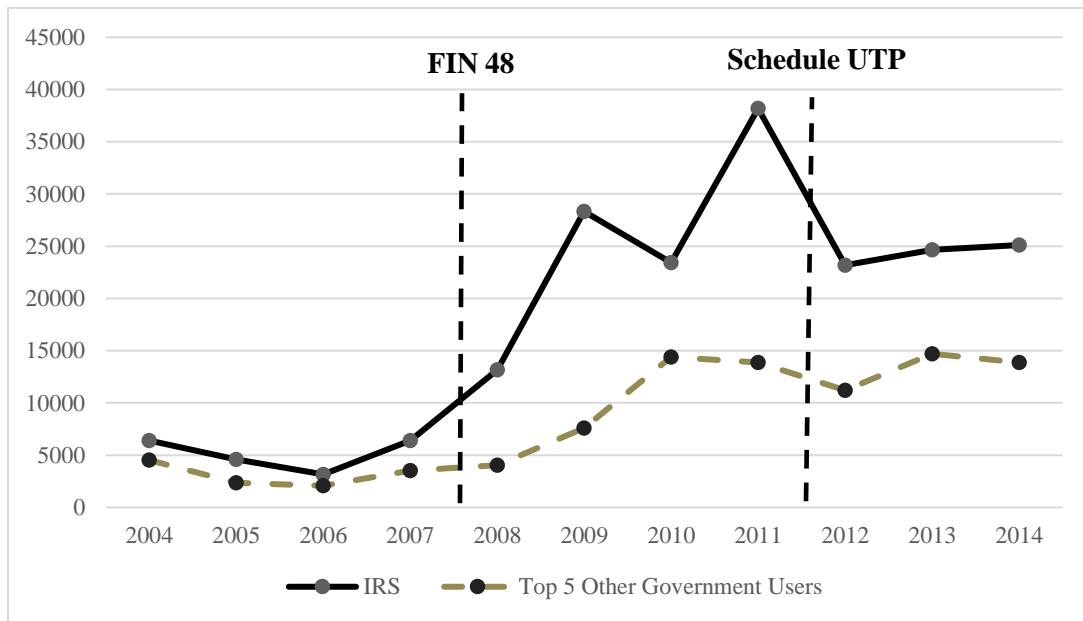


Figure A6 plots the number of times each year from 2004 to 2014 that an individual with an IRS IP address downloaded Form 10-K (Annual Report) from the SEC’s Edgar website compared to the cumulative number of times an individual with an IP address registered to the U.S. Census Bureau, U.S. Department of Justice, California Franchise Tax Board, Fannie Mae, or the Federal Trade Commission downloaded Form10-K.

3.2 Changes to IRS attention around FIN 48 – Comparison to Other Government Downloads

To repeat the analysis done in Section 4.1 of the manuscript using the download activity of other government entities as a benchmark group, we estimate each of the following regressions separately using OLS, as follows:

$$IRS\ 10\text{-}K\ DOWNLOADS_{i,t} = \alpha + \beta_{1,A}POST\ FIN48_t + \beta_{K,A}CONTROLS_{i,t} + \varepsilon_{i,t}, \quad (A1a)$$

$$OTHER\ 10\text{-}K\ DOWNLOADS_{i,t} = \alpha + \beta_{1,C}POST\ FIN48_t + \beta_{K,A}CONTROLS_{i,t} + \varepsilon_{i,t}. \quad (A1b)$$

The dependent variable in equation (A1a), *IRS 10-K DOWNLOADS*, is the number of IRS downloads of firm *i*'s 10-K in year *t*, as previously defined. In equation (A1b), *OTHER 10-K DOWNLOADS* is the number of 10-K downloads made by the five government entities listed above.

Table A4 reports the results of estimating equations (A1a) and (A1b). In both equations, the coefficient on *POST FIN48* is positive and significant, suggesting an increasing trend in downloads of EDGAR filings. As before, the *POST FIN48* coefficient for IRS downloads of the 10-K in Column 1 is 1.052, which suggests that IRS 10-K downloads nearly doubled subsequent to FIN 48. The coefficient of 0.455 in Column 2 suggests an upward trend in other government entities' attention to the 10-Ks subsequent to FIN 48.⁸ However, the magnitude of the change in IRS attention to 10-Ks following FIN 48 is more than double the change in other government entities' attention to 10-Ks. Specifically, the cross-equation difference in the coefficients on *POST FIN48* in Columns 1 and 2 is statistically significant ($\chi^2 = 983$; p-value < 0.0001). Overall, the results in Table A4 corroborate earlier findings that IRS attention to firm's annual public financial disclosures substantially increased following FIN 48 and this increase was not due to a general use trend within the government use of these data.

⁸ The regressions are in semi-log form, so the magnitude of the change in downloads can be approximated by raising *e* to each coefficient estimate and then subtracting one.

Table A4
IRS Attention to Public Tax Disclosure and FIN 48—Other Government Downloads

<i>DEPENDENT VARIABLE</i>	<i>IRS 10-K DOWNLOADS</i>	<i>OTHER 10-K DOWNLOADS</i>
<u>VARIABLE</u>	<u>Column 1</u>	<u>Column 2</u>
<i>POST FIN48</i>	1.052*** (62.78)	0.455*** (32.48)
<i>CASH ETR</i>	0.003 (0.48)	-0.001 (-0.21)
<i>GAAP ETR</i>	-0.028*** (-3.89)	-0.026*** (-4.36)
<i>BTD</i>	-0.011 (-1.27)	-0.036*** (-4.75)
<i>DTA</i>	0.019** (2.18)	0.014** (2.01)
<i>DTL</i>	-0.008 (-0.80)	-0.016** (-2.01)
<i>SIZE</i>	0.222*** (27.52)	0.188*** (26.69)
<i>MARKET TO BOOK</i>	0.002 (1.37)	0.001 (0.91)
<i>MNE</i>	0.029 (1.24)	0.017 (0.89)
<i>LEVERAGE</i>	-0.100** (-2.30)	-0.022 (-0.58)
<i>R&D INTENSITY</i>	0.018 (1.50)	0.025*** (4.26)
<i>INVENTORY INTENSITY</i>	0.060 (0.72)	-0.106 (-1.63)
<i>CAPITAL INTENSITY</i>	-0.196*** (-3.73)	-0.206*** (-4.85)
<i>ROA</i>	0.252** (2.17)	0.042 (0.42)
<i>CHANGE IN NOL</i>	0.032 (1.21)	0.015 (0.81)
<i>CASH</i>	-0.007 (-0.17)	0.015 (0.51)
<i>SALES GROWTH</i>	-0.085*** (-4.62)	0.018 (0.97)
<i>INTANGIBLE INTENSITY</i>	-0.167*** (-3.69)	-0.014 (-0.35)
<i>INDUSTRY FIXED EFFECTS</i>	YES	YES
<i>S.E. CLUSTERED BY:</i>	FIRM	FIRM
<i>OBSERVATIONS</i>	9,795	9,795
<i>ADJUSTED R²</i>	0.457	0.323
Cross Equation Testing: <i>POST FIN48</i>		Col 1 = Col 2
χ^2 Statistic (P-Value)		953.34 (0.0000)

Table A4 reports the results of regressing IRS and other government downloads of SEC filings on an indicator for the period after FIN 48 (*POST FIN48*) and firm characteristics. *IRS 10-K DOWNLOADS* is the logged number of times during year t that an individual using an IRS IP address downloaded a 10-K from EDGAR for firm i . *OTHER 10-K DOWNLOADS* is a similar count from the U.S. Census Bureau, U.S. Dept. of Justice, California Franchise Tax Board, Fannie Mae, and the Federal Trade Commission. *POST FIN48* is set equal to one for the three years following implementation of FIN 48 (i.e., 2008-2010). We test the cross-equation difference in *POST FIN48* using seemingly unrelated estimation and report the Chi-square test statistics in the bottom row. The sample period covers three years before/after FIN 48 (i.e., 2005-2010). All variables are defined in the appendix. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

3.3 Changes to IRS attention around Schedule UTP – Other Government Downloads

As a robustness check to the analysis done in Section 4.2 of the manuscript using the download activity of other government entities as a benchmark group, we estimate each of the following regressions separately using OLS, as follows:

$$IRS\ 10-K\ DOWNLOADS_{i,t} = \alpha + \beta_{1,A}POST\ UTP_t + \beta_{K,A}CONTROLS_{i,t} + \varepsilon_{i,t}, \quad (A2a)$$

$$OTHER\ 10-K\ DOWNLOADS_{i,t} = \alpha + \beta_{1,B}POST\ UTP_t + \beta_{K,A}CONTROLS_{i,t} + \varepsilon_{i,t}. \quad (A2b)$$

All variables are defined previously. As before, in each of the equations above, the dependent variable represents a different measure of EDGAR downloads by the IRS. In each equation, we also include a vector of *CONTROLS*, which mirrors the variables found in *TAX AVOIDANCE* and *FIRM CHARACTERISTICS* from equation (1) of the manuscript.

Table A5 reports the results of estimating equations (A2a) and (A2b). In all equations, the coefficient on *POST FIN48* is negative and significant, suggesting a decreasing trend in downloads of EDGAR filings in the latter years of the sample period. The *POST UTP* coefficient for IRS downloads of the 10-K in Column 1 is -0.203, which suggests that IRS 10-K downloads decreased by 18% subsequent to the implementation of Schedule UTP. The coefficient of 0.125 in Column 2 suggests an increase in other government entities' attention to 10-Ks. Thus, the decrease in IRS attention to 10-Ks following Schedule UTP does not merely follow the trend of general attention by government entities to 10-Ks over the same period. The relative difference is statistically significant at the 1% level (χ^2 values of 232) in the cross-equation test. The results in Table A5 corroborate earlier findings that when the IRS implemented increased private disclosure reporting requirements, IRS attention to firms' relevant public financial disclosures decreased.

Table A5

IRS Attention to Public Tax Disclosure and Schedule UTP–Other Government Downloads

<i>DEPENDENT VARIABLE</i>	<i>IRS 10-K DOWNLOADS</i>	<i>OTHER GOVT DOWNLOADS</i>
<u>VARIABLE</u>	<u>Column 1</u>	<u>Column 2</u>
<i>POST UTP</i>	-0.203*** (-11.09)	0.125*** (7.85)
<i>CASH ETR</i>	-0.003 (-0.31)	0.012* (1.70)
<i>GAAP ETR</i>	-0.024*** (-2.77)	-0.018*** (-2.50)
<i>BTD</i>	0.008 (0.71)	-0.026*** (-2.88)
<i>DTA</i>	0.042*** (4.43)	0.026*** (3.37)
<i>DTL</i>	0.027** (2.47)	0.030*** (3.37)
<i>UTB</i>	-0.006 (-0.48)	-0.009 (-0.91)
<i>SIZE</i>	0.239*** (24.78)	0.256*** (31.91)
<i>MARKET TO BOOK</i>	-0.001 (-0.92)	-0.002 (-1.04)
<i>MNE</i>	0.064** (2.15)	0.006 (0.23)
<i>LEVERAGE</i>	-0.185*** (-3.01)	-0.084 (-1.59)
<i>R&D INTENSITY</i>	0.025 (1.49)	0.055** (2.28)
<i>INVENTORY INTENSITY</i>	-0.125 (-1.17)	-0.015 (-0.16)
<i>CAPITAL INTENSITY</i>	-0.319*** (-4.58)	-0.257*** (-4.67)
<i>ROA</i>	0.363** (2.42)	0.534*** (4.32)
<i>CHANGE IN NOL</i>	-0.004 (-0.11)	0.013 (0.50)
<i>CASH</i>	-0.220*** (-4.18)	-0.107** (-2.23)
<i>SALES GROWTH</i>	-0.072*** (-2.98)	0.018 (0.97)
<i>INTANGIBLE INTENSITY</i>	-0.258*** (-4.16)	0.009 (0.18)
<i>INDUSTRY FIXED EFFECTS</i>	YES	YES
<i>S.E. CLUSTERED BY:</i>	FIRM	FIRM
<i>OBSERVATIONS</i>	9,089	9,089
<i>ADJUSTED R²</i>	0.293	0.353
Cross Equation Testing: <i>POST UTP</i>	Col 1 = Col 2	
χ^2 Statistic (P-Value)	232.07 (0.0000)	

Table A5 reports the results of regressing IRS and other government downloads of SEC filings on an indicator for the period after Schedule UTP (*POST UTP*) and firm characteristics. The dependent variable definitions follow Table A4. *POST UTP* is set equal to one for the first three years in which the IRS would have access to UTP filings for large firms (i.e., 2012-2014). We test the cross-equation difference in *POST UTP* using seemingly unrelated estimation and report the Chi-square test statistics in the bottom row. The sample period covers three years before/after Schedule UTP (i.e., 2009-2014). All variables are defined in the appendix. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

3.4 Retesting All Predictions Using Download Differences as Dependent Variables

In Table 3 of the manuscript, we performed hypothesis testing by comparing the coefficients on *POST FIN48* across equations that used *IRS 10-K DOWNLOADS* and *10-Q DOWNLOADS* as dependent variables. Table 4 repeated the same process with *POST UTP*. As an alternative approach to hypothesis testing, we regress the *difference* between IRS 10-K and 10-Q downloads on a timing variable (*POST FIN48* or *POST UTP*) and relevant controls. We also repeat the same test but substitute *OTHER GOVT DOWNLOADS* instead of *IRS 10-Q DOWNLOADS* as the counterfactual to be differenced.

The results of this analysis around FIN 48 are presented in Table A6 and are consistent with earlier inference. Using both counterfactual groups, the coefficient on *POST FIN48* is positive and significant suggesting that IRS use of the 10-K increased following FIN 48 relative to both IRS use of the 10-Q and other government agencies use of the 10-K.

The results of similar analysis around the implementation of Schedule UTP are presented in Table A7 and also are consistent with earlier results. Relative to both benchmark groups, IRS use of the 10-K decreased following the implementation of Schedule UTP.

Table A6
IRS Attention and FIN 48 Using Download Differences

<i>DEPENDENT VARIABLE</i>	<i>IRS DOWNLOAD DIFFERENCE</i>	<i>IRS v. OTHER DOWNLOAD DIFFERENCE</i>
<u>VARIABLE</u>	<u>Column 1</u>	<u>Column 2</u>
<i>POST FIN48</i>	5.144*** (27.06)	3.673*** (16.09)
<i>CASH ETR</i>	-0.082 (-1.24)	-0.036 (-0.46)
<i>GAAP ETR</i>	-0.249*** (-3.82)	-0.174** (-2.22)
<i>BTD</i>	-0.059 (-0.69)	0.160 (1.44)
<i>DTA</i>	0.170** (2.19)	0.179** (1.97)
<i>DTL</i>	-0.222*** (-2.60)	-0.034 (-0.36)
<i>SIZE</i>	1.491*** (16.00)	0.858*** (9.02)
<i>MARKET TO BOOK</i>	0.007 (0.45)	0.013 (0.89)
<i>MNE</i>	0.103 (0.50)	0.334 (1.40)
<i>LEVERAGE</i>	-0.441 (-1.27)	0.065 (0.17)
<i>R&D INTENSITY</i>	0.184*** (4.01)	0.060 (0.80)
<i>INVENTORY INTENSITY</i>	0.576 (0.86)	1.023 (1.24)
<i>CAPITAL INTENSITY</i>	-1.350*** (-3.31)	-0.850* (-1.88)
<i>ROA</i>	-0.322 (-0.32)	0.590 (0.50)
<i>CHANGE IN NOL</i>	0.144 (0.91)	0.127 (0.83)
<i>CASH</i>	0.647** (2.14)	0.697** (2.22)
<i>SALES GROWTH</i>	-0.657*** (-3.67)	-0.749*** (-5.16)
<i>INTANGIBLE INTENSITY</i>	-1.006** (-2.35)	-1.327*** (-2.85)
<i>INDUSTRY FIXED EFFECTS</i>	YES	YES
<i>S.E. CLUSTERED BY: OBSERVATIONS</i>	FIRM 9,795	FIRM 9,795
<i>ADJUSTED R²</i>	0.218	0.079

Table A6 reports the results of regressing the difference between *IRS 10-K DOWNLOADS* and *IRS 10-Q DOWNLOADS* (i.e., *IRS DOWNLOAD DIFFERENCE*) on an indicator for the period after FIN 48 (*POST FIN48*) and additional firm characteristics. We also repeat this test using the difference between *IRS 10-K DOWNLOADS* and *OTHER GOVT DOWNLOADS* (i.e., *IRS v. OTHER DOWNLOAD DIFFERENCE*) as an alternative dependent variable. *POST FIN48* is set equal to one for the three years following implementation of FIN 48 (i.e., 2008-2010). The sample period covers three years before/after FIN 48 (i.e., 2005-2010). All variables are defined in the appendix. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

Table A7**IRS Attention and Schedule UTP Using Download Differences**

<i>DEPENDENT VARIABLE</i>	<i>IRS DOWNLOAD DIFFERENCE</i>	<i>IRS v. OTHER DOWNLOAD DIFFERENCE</i>
<u>VARIABLE</u>	<u>Column 1</u>	<u>Column 2</u>
<i>POST UTP</i>	-2.176*** (-5.10)	-2.658*** (-5.36)
<i>CASH ETR</i>	-0.019 (-0.11)	-0.168 (-0.86)
<i>GAAP ETR</i>	-0.826*** (-4.34)	-0.629*** (-3.17)
<i>BTD</i>	0.254 (1.08)	0.453* (1.80)
<i>DTA</i>	-0.036 (-0.20)	-0.105 (-0.56)
<i>DTL</i>	0.310 (1.29)	0.287 (1.16)
<i>UTB</i>	-0.187 (-0.85)	-0.095 (-0.39)
<i>SIZE</i>	3.876*** (12.26)	2.450*** (8.16)
<i>MARKET TO BOOK</i>	-0.016 (-0.45)	-0.026 (-0.67)
<i>MNE</i>	0.605 (1.06)	1.213* (1.89)
<i>LEVERAGE</i>	-2.365** (-2.13)	-1.048 (-0.92)
<i>R&D INTENSITY</i>	0.790*** (3.04)	0.368 (1.34)
<i>INVENTORY INTENSITY</i>	-1.968 (-0.90)	-3.327 (-1.40)
<i>CAPITAL INTENSITY</i>	-6.612*** (-4.56)	-5.007*** (-3.42)
<i>ROA</i>	4.532 (1.38)	3.024 (0.91)
<i>CHANGE IN NOL</i>	0.178 (0.41)	0.149 (0.46)
<i>CASH</i>	-2.091** (-2.29)	-1.835** (-2.09)
<i>SALES GROWTH</i>	-0.083 (-0.17)	-0.214 (-0.47)
<i>INTANGIBLE INTENSITY</i>	-4.824*** (-3.45)	-5.111*** (-3.69)
<i>INDUSTRY FIXED EFFECTS</i>	YES	YES
<i>S.E. CLUSTERED BY:</i>	FIRM	FIRM
<i>OBSERVATIONS</i>	9,089	9,089
<i>ADJUSTED R²</i>	0.122	0.056

Table A7 reports the results of regressing the difference between *IRS 10-K DOWNLOADS* and a benchmark group for the period after Schedule UTP (*POST UTP*) and firm characteristics. The dependent variable definitions follow Table A6. *POST UTP* is set equal to one for the first three years in which the IRS would have access to UTP filings for large firms (i.e., 2012-2014). The sample period covers three years before/after Schedule UTP (i.e., 2009-2014). All variables are defined in the appendix. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

4. Additional Disclosure Tests

4.1 Changes in Tax-related Disclosure following Schedule UTP

In Section 5.1 of the manuscript, we focused our attention on the tax footnote. While doing so facilitates identification of tax-related disclosure, it ignores changes in tax disclosure *outside* of the tax footnote. To overcome this limitation, we supplement this analysis by introducing two additional measures of tax disclosure, both of which are novel to the literature.

First, the SEC has mandated XBRL reporting, and phased in the requirement from 2009 to 2011 (Blankespoor et al. 2014). Firms are required to “tag” each meaningful financial number used in their disclosures, and these tags are tied back to fairly specific, often GAAP-defined, numbers. We define *TAX XBRL TAGS* as the log number of tax-related XBRL tags in firm *i*’s 10-K in fiscal year *t*.⁹ By using these tags, we are able to differentiate tax-related numbers from non-tax related numbers. Importantly, while *NUMBER OF NUMBERS* is constrained to the tax footnote and implicitly assumes that every number in the tax footnote is tax-related, *TAX XBRL TAGS* examines every tax-related number in the 10-K and only those related to taxes.¹⁰ Thus, *TAX XBRL TAGS* is intended to reflect the total quantity of tax disclosure across the 10-K.

Second, we further exploit XBRL by focusing our attention on XBRL tags pertaining to tax rate reconciliation. The effective tax rate reconciliation (often called the “rate rec”) is a GAAP-required disclosure in the tax footnote that provides a listing of book-tax differences to reconcile between the statutory tax rate and the firm’s effective tax rate. Firms seem to exercise some

⁹ See Section 4 below for a representative list of tax-related XBRL tags.

¹⁰ While this measure provides some advantages, it comes at a cost. XBRL reporting is relatively recent, and the time it has been in existence limits our sample period for this test. Further, since the phase in of mandated XBRL reporting was applied to firms based on public float, our sample of firms in the 2009 and 2010 will be skewed towards larger firms.

discretion over what line items to list separately, and how many line items to include in the rate reconciliation [Raedy et al. 2011]. Prior research calls this concept “disaggregation,” in which managers use accounting discretion to separate certain line items apart from each other or conversely lump certain line items together [e.g., Livnat and Zarowin 1990; Amir et al. 2013]. While reporting standards mandate a 5% materiality threshold,¹¹ some firms appear to voluntarily disclose more than is required of them, providing meaningful variation in the number of reconciling items in the ETR reconciliation.¹² We define *RATE REC XBRL TAGS* as the log number of XBRL tags in firm *i*'s 10-K tax footnote in fiscal year *t* related to the effective tax rate reconciliation items. Thus, our second XBRL-based measure allows us to more cleanly identify discretionary tax-related XBRL tags in the tax footnote. As such, *RATE REC XBRL TAGS* is intended to capture the construct of the disaggregation of tax disclosure.

We estimate equation (4) found in the manuscript, and replace the dependent variable first with *TAX XBRL TAGS* and then with *RATE REC XBRL TAGS*. The results from these estimations are tabulated in Table A8. In Column 1, the coefficient of interest, *UTP FIRM*UTP DISCLOSURE PERIOD*, is positive and significant ($p < 0.01$), suggesting that following Schedule UTP, firms subject to Schedule UTP included more tax-specific XBRL tags in their 10-Ks relative to non-UTP firms. Similarly, in Column 2, when we replace the dependent variable with *RATE REC XBRL TAGS*, we find a statistically significant increase ($p < 0.01$) in the number of tax-specific “rate rec” XBRL tags in the tax footnote of the 10-K.

These results suggest that firms subject to UTP increased their quantitative tax disclosure across their 10-Ks and decreased the level of aggregation in their effective tax rate reconciliation.

¹¹ ASC 740-10-50 requires significant items be included in reconciliation, and SEC Regulation S-X, Rule 4-08(h) defines significant as 5% or more of the computed amount in the ETR reconciliation.

¹² For example, Novell in 2010 included an R&D credit that appears to be well below the materiality threshold. Such examples are not uncommon.

These findings are also consistent with the results from Table 5 of the manuscript, which show an increase in *NUMBER OF NUMBERS* and *NUMBER OF WORDS*. The additional XBRL tags in the tax footnote pertaining to the ETR reconciliation will be counted as additional numbers and, at the same time, the increase in qualitative disclosure may be partially attributable to an increase in narrative disclosure explaining ETR reconciliation items. Finally, these results are further consistent with the manuscript's Table 5 result showing a decrease in *TEXTUAL SIMILARITY*, as additional ETR reconciliation XBRL tags that require explaining will likely produce text dissimilar from the prior year's tax footnote disclosure. As such, the supplemental results in Table A8 corroborate those found in the manuscript and thus provide further support for our third prediction.¹³

¹³ Our inferences here and in Section 5 of the manuscript remain qualitatively unchanged when including tax avoidance proxies to control for the fact that some firms change the nature of their tax avoidance activities as a result of Schedule UTP (Towery 2015). We choose not to include these controls in our main analysis as it would result in the sample being reduced to nearly half its current size due to data limitations.

TABLE A8*The Impact of Schedule UTP on Disclosure – Tax-Related XBRL Tags*

<i>DEPENDENT VARIABLE</i>	<i>TAX XBRL TAGS</i>	<i>RATE REC XBRL TAGS</i>
<u>VARIABLE</u>	<u>Column 1</u>	<u>Column 2</u>
<i>UTP FIRM</i>	-0.162*** (-2.93)	-0.182*** (-2.87)
<i>UTP DISCLOSURE PERIOD</i>	0.733*** (22.81)	0.431*** (11.60)
<i>UTP FIRM x UTP DISCLOSURE PERIOD</i>	0.266*** (4.70)	0.194*** (3.08)
<i>CONTROL VARIABLES</i>	<i>YES</i>	<i>YES</i>
<i>INDUSTRY FIXED EFFECTS</i>	<i>YES</i>	<i>YES</i>
<i>S.E. CLUSTERED BY:</i>	<i>FIRM</i>	<i>FIRM</i>
<i>OBSERVATIONS</i>	12,445	12,445
<i>ADJUSTED R²</i>	0.420	0.152

Table A8 reports the results of regressing proxies for 10-K tax-related disclosure on an indicator for the imposition of Schedule UTP (*UTP DISCLOSURE PERIOD*) interacted with an indicator for firms subject to it (*UTP FIRM*). *TAX XBRL TAGS* is the logged number of tax-related XBRL tags in the firm *i*'s 10-K in year *t*. *RATE REC XBRL TAGS* is the logged number of XBRL tags related to the effective tax rate reconciliation items in firm *i*'s tax footnote in year *t*. The dependent variables reflect firms' provision for tax disclosure as captured by various XBRL tags in the firm's 10-K. Control variables are included, but unreported for parsimony. The sample period covers the period post-FIN48 (i.e., 2008-2014) and is smaller than the prior table due to the XBRL data requirement. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

Next, we investigate whether the use of uncertain words increased following the imposition of Schedule UTP, as it may have influenced firms' willingness to discuss uncertain tax issues. Following Loughran and McDonald [2013], we measure our proxy for uncertain tax issues, *UNCERTAIN WORDS*, as the number of uncertain words contained in the tax footnote of the 10-K. As a result, we employ *UNCERTAIN WORDS* to capture the notion of managers' willingness to discuss uncertain tax issues (i.e., likely those issues for which tax-related proprietary costs have been reduced by Schedule UTP).

In Table A9, we tabulate the results from replacing the dependent variable in equation (4) with *UNCERTAIN WORDS*. The coefficient on *UTP FIRM*UTP DISCLOSURE PERIOD* is 0.638 and statistically significant ($p < 0.01$), suggesting that firms' discussion of uncertain tax issues in the tax footnote increased following the imposition of Schedule UTP.¹⁴ This finding helps confirm our prediction that firms changed their disclosure in response to changes in private tax disclosure requirements, and also confirms that these changes were linked to the content of the private tax disclosures which, in the case of UTP, pertained to uncertain tax positions.

¹⁴ This test assumes that firms are not merely mentioning that Schedule UTP requires them to now disclose uncertain tax positions to the IRS, without actually providing any meaningful additional disclosure. To rule out this possibility, we search all EDGAR filings for references to "Schedule UTP" using Morningstar Document Research's online search tool and find only ten instances of "Schedule UTP" in all 10-Ks.

TABLE A9*The Impact of Schedule UTP on Disclosure – Uncertain Words in the Tax Footnote*

<i>DEPENDENT VARIABLE</i>	<i>UNCERTAIN WORDS</i>
<u>VARIABLE</u>	<u>Column 1</u>
<i>UTP FIRM</i>	1.834*** (5.39)
<i>UTP DISCLOSURE PERIOD</i>	-1.823*** (-7.85)
<i>UTP FIRM x UTP DISCLOSURE PERIOD</i>	0.638** (2.07)
<i>CONTROLS</i>	<i>YES</i>
<i>INDUSTRY</i>	<i>YES</i>
<i>S.E. CLUSTERED BY:</i>	<i>FIRM</i>
<i>OBSERVATIONS</i>	20,511
<i>ADJUSTED R²</i>	0.138

Table A9 reports the results of regressing *UNCERTAIN WORDS* on an indicator for the imposition of Schedule UTP (*UTP DISCLOSURE PERIOD*) interacted with an indicator for firms subject to it (*UTP FIRM*). *UNCERTAIN WORDS* is the number of uncertain words contained in firm *i*'s tax footnote in year *t* [Loughran and McDonald, 2013]. Control variables are included, but unreported for parsimony. The sample period covers the period post-FIN48 (i.e., 2008-2014). All other variables are defined in the appendix. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively (two-tailed).

5. Other Tables

Table A10

Examples of Selected Tax-related XBRL Tags
(complete list of 450 tags available upon request)

DeferredTaxAssetsOperatingLossCarryforwardsDomestic
DeferredTaxAssetsEquityMethodInvestments
DeferredTaxAssetsNetAbstract
UnrecognizedTaxBenefitsIncreasesResultingFromPriorPeriodTaxPositions
DeferredTaxAssetsTaxDeferredExpenseReservesAndAccrualsAssetRetirementObligations
DeferredTaxAssetsValuationAllowance
EffectiveIncomeTaxRateReconciliationTaxContingencies
UnrecognizedTaxBenefitsDecreasesResultingFromSettlementsWithTaxingAuthorities
DeferredStateAndLocalIncomeTaxExpenseBenefit
IncomeTaxReconciliationTaxContingenciesAbstract
IncomeTaxRateReconciliationDeductionsEmployeeStockOwnershipPlanDividends
IncomeTaxReconciliationChangeInEnactedTaxRate
DeferredTaxAssetsDerivativeInstruments
IncomeTaxReconciliationTaxContingenciesForeign
EffectiveIncomeTaxRateReconciliationTaxSettlementsDomestic
DeferredTaxLiabilitiesDeferredExpense
OperatingLossCarryforwardsLineItems
IncomeTaxReconciliationNondeductibleExpenseResearchAndDevelopment
DeferredTaxAssetsTaxDeferredExpenseReservesAndAccrualsAccruedLiabilities
IncomeTaxReconciliationDeductionsExtraterritorialIncomeExclusion
DeferredTaxAssetsTaxDeferredExpenseAbstract
EffectiveIncomeTaxRateReconciliationStateAndLocalIncomeTaxes
EffectiveIncomeTaxRateReconciliationNondeductibleExpenseImpairmentLosses
OperatingLossCarryforwardsTable
IncomeTaxExaminationPenaltiesAndInterestAccruedAbstract
DeferredTaxAssetsTaxDeferredExpenseReservesAndAccrualsOther
DeferredTaxLiabilitiesOtherFiniteLivedAssets
DeferredTaxAssetsTaxDeferredExpenseReservesAndAccrualsLegalSettlements
DeferredTaxLiabilitiesClassificationAbstract
DeferredTaxLiabilityNotRecognizedDeterminationOfDeferredTaxLiabilityIsNotPracticable
DeferredTaxAssetsInventory
UnrecognizedTaxBenefitsDecreasesResultingFromCurrentPeriodTaxPositions
DeferredTaxAssetsGrossAbstract
IncomeTaxReconciliationEquityInEarningsLossesOfUnconsolidatedSubsidiary
EffectiveIncomeTaxRateReconciliationRepatriationOfForeignEarnings
IncomeTaxReconciliationRepatriationOfForeignEarningsJobsCreationActOf2004
DeferredTaxLiabilitiesOtherComprehensiveIncome
SummaryOfOtherTaxCarryforwardsTextBlock
EffectiveIncomeTaxRateReconciliationTaxCreditsAbstract
EffectiveIncomeTaxRateReconciliationTaxCreditsForeign
EffectiveIncomeTaxRateReconciliationNondeductibleExpense
DeferredTaxesBusinessCombinationValuationAllowanceAvailableToReduceGoodwill
ForeignEarningsRepatriatedUnderAmericanJobsCreationActOf2004RepatriatedEarnings
ScheduleOfIncomeBeforeIncomeTaxDomesticAndForeignTableTextBlock

Table A11**List of XBRL Tags in ETR Reconciliation**

EffectiveIncomeTaxRateContinuingOperationsTaxRateReconciliationAbstract	EffectiveIncomeTaxRateReconciliationDeductionsEmployeeStockOwnershipPlanDividends
EffectiveIncomeTaxRateReconciliationAtFederalStatutoryIncomeTaxRate	EffectiveIncomeTaxRateReconciliationDeductionsMedicarePrescriptionDrugBenefit
EffectiveIncomeTaxRateReconciliationStateAndLocalIncomeTaxes	EffectiveIncomeTaxRateReconciliationDeductionsOther
EffectiveIncomeTaxRateReconciliationForeignIncomeTaxRateDifferential	EffectiveIncomeTaxRateReconciliationDeductions
EffectiveIncomeTaxRateReconciliationTaxCreditsAbstract	EffectiveIncomeTaxRateReconciliationTaxSettlementsAbstract
EffectiveIncomeTaxRateReconciliationTaxCreditsResearch	EffectiveIncomeTaxRateReconciliationTaxSettlementsDomestic
EffectiveIncomeTaxRateReconciliationTaxCreditsForeign	EffectiveIncomeTaxRateReconciliationTaxSettlementsForeign
EffectiveIncomeTaxRateReconciliationTaxCreditsInvestment	EffectiveIncomeTaxRateReconciliationTaxSettlementsStateAndLocal
EffectiveIncomeTaxRateReconciliationTaxCreditsOther	EffectiveIncomeTaxRateReconciliationTaxSettlementsOther
EffectiveIncomeTaxRateReconciliationTaxCredits	EffectiveIncomeTaxRateReconciliationTaxSettlements
EffectiveIncomeTaxRateReconciliationNondeductibleExpenseAbstract	EffectiveIncomeTaxRateReconciliationTaxContingenciesAbstract
EffectiveIncomeTaxRateReconciliationNondeductibleExpenseDepreciationAndAmortizationAbstract	EffectiveIncomeTaxRateReconciliationTaxContingenciesDomestic
EffectiveIncomeTaxRateReconciliationNondeductibleExpenseDepreciation	EffectiveIncomeTaxRateReconciliationTaxContingenciesForeign
EffectiveIncomeTaxRateReconciliationNondeductibleExpenseAmortization	EffectiveIncomeTaxRateReconciliationTaxContingenciesStateAndLocal
EffectiveIncomeTaxRateReconciliationNondeductibleExpenseDepreciationAndAmortization	EffectiveIncomeTaxRateReconciliationTaxContingenciesOther
EffectiveIncomeTaxRateReconciliationNondeductibleExpenseDepletion	EffectiveIncomeTaxRateReconciliationTaxContingencies
EffectiveIncomeTaxRateReconciliationNondeductibleExpenseMealsAndEntertainment	EffectiveIncomeTaxRateReconciliationOtherReconcilingItemsPercentAbstract
EffectiveIncomeTaxRateReconciliationNondeductibleExpenseCharitableContributions	EffectiveIncomeTaxRateReconciliationTaxExemptIncome
EffectiveIncomeTaxRateReconciliationNondeductibleExpenseRestructuringCharges	EffectiveIncomeTaxRateReconciliationEquityInEarningsLossesOfUnconsolidatedSubsidiary
EffectiveIncomeTaxRateReconciliationNondeductibleExpenseImpairmentLosses	EffectiveIncomeTaxRateReconciliationMinorityInterestIncomeExpense
EffectiveIncomeTaxRateReconciliationNondeductibleExpenseResearchAndDevelopment	EffectiveIncomeTaxRateReconciliationTaxHolidays
EffectiveIncomeTaxRateReconciliationNondeductibleExpenseShareBasedCompensationCost	EffectiveIncomeTaxRateReconciliationDispositionOfBusiness
EffectiveIncomeTaxRateReconciliationNondeductibleExpenseLeases	EffectiveIncomeTaxRateReconciliationDispositionOfAssets
EffectiveIncomeTaxRateReconciliationNondeductibleExpenseLifeInsurance	EffectiveIncomeTaxRateReconciliationRepatriationOfForeignEarnings
EffectiveIncomeTaxRateReconciliationNondeductibleExpenseOther	EffectiveIncomeTaxRateReconciliationRepatriationForeignEarningsJobsCreationActOf2004
EffectiveIncomeTaxRateReconciliationNondeductibleExpense	EffectiveIncomeTaxRateReconciliationChangeInEnactedTaxRate
EffectiveIncomeTaxRateReconciliationDeductionsAbstract	EffectiveIncomeTaxRateReconciliationPriorYearIncomeTaxes
EffectiveIncomeTaxRateReconciliationDeductionsExtraterritorialIncomeExclusion	EffectiveIncomeTaxRateReconciliationChangeInDeferredTaxAssetsValuationAllowance
EffectiveIncomeTaxRateReconciliationDeductionsQualifiedProductionActivities	EffectiveIncomeTaxRateReconciliationOtherAdjustments
EffectiveIncomeTaxRateReconciliationDeductionsDividends	EffectiveIncomeTaxRateReconciliationOtherReconcilingItemsPercent

TABLE A12
Correlation Tables

Panel A: IRS Attention

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)		
<i>IRS 10-K DOWNLOADS</i>	(1)	1.00																		
<i>OTHER GOVT DOWNLOAD.</i>	(2)	0.30	1.00																	
<i>IRS 10-Q DOWNLOADS</i>	(3)	0.36	0.17	1.00																
<i>CASH ETR</i>	(4)	-0.01	-0.01	0.00	1.00															
<i>GAAP ETR</i>	(5)	-0.02	0.00	0.00	0.31	1.00														
<i>BTD</i>	(6)	0.00	0.00	0.00	-0.06	-0.06	1.00													
<i>UTB</i>	(7)	0.15	0.09	0.09	-0.03	-0.04	0.01	1.00												
<i>SIZE</i>	(8)	0.33	0.29	0.20	0.01	0.06	-0.01	0.19	1.00											
<i>MARKET TO BOOK</i>	(9)	0.01	0.01	0.02	-0.01	0.00	-0.01	0.00	0.03	1.00										
<i>MNE</i>	(10)	0.16	0.11	0.08	0.04	-0.02	-0.01	0.27	0.36	0.01	1.00									
<i>LEVERAGE</i>	(11)	0.02	0.01	0.02	-0.09	0.01	0.02	-0.04	0.27	-0.02	-0.05	1.00								
<i>R&D INTENSITY</i>	(12)	0.00	0.00	0.00	-0.04	-0.06	0.04	0.07	-0.06	0.01	0.05	-0.06	1.00							
<i>INVENTORY INTENSITY</i>	(13)	-0.04	-0.06	-0.03	0.10	0.00	-0.02	-0.08	-0.13	-0.05	-0.03	-0.08	-0.05	1.00						
<i>CAPITAL INTENSITY</i>	(14)	-0.03	0.00	0.01	-0.11	0.00	0.02	-0.16	0.15	-0.01	-0.23	0.32	-0.09	-0.13	1.00					
<i>ROA</i>	(15)	-0.01	0.01	0.01	0.05	-0.04	0.09	0.03	-0.11	0.13	-0.06	-0.17	0.04	0.02	-0.06	1.00				
<i>CHANGE IN NOL</i>	(16)	0.00	0.00	0.00	0.01	0.00	0.70	0.00	-0.01	-0.01	0.00	0.00	-0.01	0.01	0.00	1.00				
<i>CASH</i>	(17)	-0.06	-0.05	-0.04	-0.05	-0.12	-0.03	0.07	-0.25	0.10	0.01	-0.17	0.08	-0.07	-0.19	0.22	-0.03	1.00		
<i>SALES GROWTH</i>	(18)	-0.05	-0.03	-0.02	-0.13	-0.10	0.03	-0.05	-0.10	0.06	-0.07	0.07	0.01	0.02	0.11	0.13	0.02	0.26	1.00	
<i>INTANGIBLE INTENSITY</i>	(19)	0.04	0.03	0.02	0.00	0.04	0.02	0.02	0.22	0.00	0.15	0.32	0.01	-0.21	-0.27	-0.15	0.04	-0.12	0.07	1.00

Panel B: Firm Disclosure

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)		
<i>NUMBER OF WORDS</i>	(1)	1.00																		
<i>NUMBER OF NUMBERS</i>	(2)	0.81	1.00																	
<i>TEXTUAL SIMILARITY</i>	(3)	-0.27	-0.19	1.00																
<i>TAX XBRL TAGS</i>	(4)	0.23	0.29	0.09	1.00															
<i>RATE REC XBRL TAGS</i>	(5)	0.08	0.02	0.05	0.52	1.00														
<i>UNCERTAIN WORDS</i>	(6)	0.76	0.67	-0.21	0.30	0.11	1.00													
<i>FOG INDEX</i>	(7)	-0.11	-0.04	0.01	-0.25	-0.36	-0.16	1.00												
<i>SIZE</i>	(8)	0.19	0.30	0.03	0.52	0.23	0.25	-0.30	1.00											
<i>MARKET TO BOOK</i>	(9)	0.00	0.01	0.02	0.05	0.04	0.01	-0.03	0.08	1.00										
<i>MNE</i>	(10)	0.16	0.25	0.03	0.42	0.22	0.26	-0.29	0.43	0.03	1.00									
<i>LEVERAGE</i>	(11)	0.01	-0.01	0.01	0.04	-0.02	0.00	0.01	0.09	-0.04	-0.06	1.00								
<i>R&D INTENSITY</i>	(12)	-0.03	-0.09	0.01	-0.13	-0.02	-0.03	0.02	-0.17	-0.01	-0.12	0.01	1.00							
<i>INVENTORY INTENSITY</i>	(13)	-0.03	-0.02	0.00	-0.01	0.00	-0.07	0.00	-0.02	-0.02	0.02	-0.02	-0.11	1.00						
<i>CAPITAL INTENSITY</i>	(14)	0.00	0.00	-0.03	-0.03	-0.06	-0.09	0.05	0.19	0.00	-0.14	0.25	-0.09	-0.10	1.00					
<i>ROA</i>	(15)	0.04	0.12	0.02	0.17	0.07	0.07	-0.11	0.42	0.14	0.15	-0.12	-0.17	0.05	0.07	1.00				
<i>CHANGE IN NOL</i>	(16)	-0.03	-0.08	-0.01	-0.11	-0.04	-0.04	0.05	-0.23	-0.09	-0.09	0.08	0.12	0.01	-0.02	-0.35	1.00			
<i>CASH</i>	(17)	-0.04	-0.09	-0.02	-0.13	-0.03	-0.03	0.02	-0.20	0.05	-0.07	-0.02	0.21	-0.07	-0.11	-0.04	0.21	1.00		
<i>SALES GROWTH</i>	(18)	-0.03	-0.07	-0.05	-0.10	-0.04	-0.05	0.03	-0.09	0.03	-0.08	0.09	0.03	0.01	0.11	-0.04	0.09	0.20	1.00	
<i>INTANGIBLE INTENSITY</i>	(19)	0.05	0.07	-0.01	0.13	0.07	0.12	-0.07	0.19	0.01	0.14	0.20	-0.05	-0.13	-0.17	0.07	0.03	-0.02	0.10	1.00

Table A10 presents Pearson correlation coefficients among the variables in our two respective samples. Panel A presents correlations among variables used in testing our first and second predictions. Panel B presents correlations among variables used in testing our third prediction.

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