

TRENDS IN THE SOURCES OF PERMANENT AND TEMPORARY BOOK-TAX DIFFERENCES DURING THE SCHEDULE M-3 ERA

Fabio B. Gaertner, Stacie K. Laplante, and Daniel P. Lynch

We use aggregate Schedule M-3 tax return data from Subchapter C corporations to provide descriptive evidence on book-tax differences from 2004 to 2013. Across the sample period, our primary findings are: (1) total book-tax differences increase, (2) a substantial amount of book-tax differences are explained by firms' operations and financing, as well as economic incentives, (3) firms report a substantial but decreasing amount of book-tax differences in the "other" categories, (4) the frequency and magnitude of reportable transactions decreases significantly, and (5) foreign earnings and repatriations increase. However, the relative amount of foreign earnings repatriated decreases substantially after 2009.

Keywords: book-tax differences, tax avoidance, taxable income, corporate income

JEL Codes: H20, H25, H29

I. INTRODUCTION

We use aggregate Schedule M-3 tax return data from Subchapter C corporations for 2004 through 2013 to investigate sources and trends in permanent and temporary book-tax differences (hereafter, BTDs). Schedule M-3 began replacing Schedule M-1 in 2004 and is used to reconcile net income (loss) reported on an entity's financial statements to net taxable income (loss) reported on its tax return to the U.S. government.¹

¹ Schedule M-3 is required to be filed by corporations with total assets at the end of the year equal to or greater than \$10 million. We use the term "corporations" to mean Subchapter C corporations filing Schedule M-3. Firms filing the following schedules are also subject to Schedule M-3 filing requirements but are not included in our data: Form 1120S; Form 1120L; Form 1120PC; Form 1065.

Fabio B. Gaertner: Accounting & Information Systems, University of Wisconsin-Madison, Madison, WI, USA (fabio.gaertner@wisc.edu)

Stacie K. Laplante: Accounting & Information Systems, University of Wisconsin-Madison, Madison, WI, USA (stacie.laplante@wisc.edu)

Daniel P. Lynch: Accounting & Information Systems, University of Wisconsin-Madison, Madison, WI, USA (daniel.lynych@wisc.edu)

Book-tax differences arise from different interpretations and applications of the tax law relative to financial accounting rules and range from arguably no risk of being challenged and sustained upon audit by a taxing authority (e.g., excluding municipal bond interest from taxable income) to a high risk of being challenged and sustained (e.g., engaging in tax shelter transactions). Although prior research uses estimates of book-tax differences to measure tax avoidance and/or earnings management (e.g., Manzon and Plesko, 2002; Hanlon, 2005; Hanlon and Heitzman, 2010), research on various components of book-tax differences is sparse due to data limitations. Using aggregate Schedule M-3 tax return data rather than estimates of book-tax differences from firms' financial statements or proprietary data sets, we provide insights on trends in specific components of temporary and permanent BTDs.

Examining trends in specific sources of book-tax differences is important for several reasons. Schedule M-3 is designed to make differences between book and taxable income more transparent to U.S. tax authorities, facilitating identification of potentially aggressive positions, and therefore increasing the efficiency of audit decisions (Mills and Plesko, 2003; Boynton and Mills, 2004; Internal Revenue Service, 2004). Prior to Schedule M-3, Schedule M-1 provided extremely sparse information, limiting any conclusions about the extent of tax avoidance or tax shelter activity that occurs (U.S. Department of the Treasury, 1999). Extant research shows the magnitude of total BTDs and cash tax avoidance increasing since the implementation of Schedule M-3 (Green and Plesko, 2016; Henry, Massel, and Towery, 2016). We investigate what specific BTDs lead to this increase. Our dataset allows us to separate both temporary and permanent BTDs into positive (i.e., taxable income lower than book income) and negative (i.e., taxable income higher than book income) amounts for over 60 account-specific line items.² We use aggregate Schedule M-3 data to document changes in specific sources of both positive and negative BTDs from 2004 to 2013. To our knowledge, we are the first paper to use Schedule M-3 data to examine these trends.

Recent research suggests firms successfully avoid more U.S. federal income taxes today than in the past. For example, Dyreng et al. (forthcoming) provide evidence that cash effective tax rates of U.S. corporations have declined by approximately 10 percentage points in the past 25 years. The specific mechanisms leading to the decline in cash taxes paid include tax planning strategies as well as tax law changes designed to increase economic activity, firm operating and financing structures, and the overall health of the economy (e.g., to counteract a recession). Because effective tax rates and book-tax differences are closely aligned (Hanlon and Heitzman, 2010; Guenther, 2014), exploring Schedule M-3 data allow us to examine specific sources of BTDs to help explain the declining trend in effective tax rates (hereafter, "ETRs").

² Schedule M-3 is a reconciliation from book to taxable income and thus classifies BTDs as positive (negative) when taxable income is higher (lower) than book income. To be consistent with prior research on BTDs we classify BTDs as positive when taxable income is lower than book income and as negative when taxable income is higher than book income (e.g., Hanlon, 2005).

Our study documents five primary findings. First, there is an overall increase in BTDs over the sample period. From 2004 to 2013, positive permanent differences increase from approximately \$345 billion to \$697 billion, while positive temporary differences rise from \$719 billion to over \$1,219 billion, suggesting the trend of lower cash ETRs (Dyreng et al., forthcoming) stems from transactions that increase both favorable permanent and favorable temporary BTDs. We also find that negative permanent and negative temporary differences grow from 2004 to 2008, and then decrease after 2008, with a large increase in negative BTDs during the period of the financial crisis. Positive differences exceed negative differences each year across the sample period other than 2007 and 2008, consistent with an increase in tax avoidance over time.

Second, many BTDs arise from firms' operating and financing structures, tax law changes, or economy-wide economic events (Seidman, 2010; Raedy, Shackelford, and Seidman, 2012). For example, we find *equity method earnings* and *dividends not eliminated in consolidation* are two of the largest reported positive permanent BTDs, consistent with prior research that uses Schedule M-1 data (Boynton et al., 2004; Boynton, DeFilippes, and Legel, 2005). We observe increases in negative permanent BTDs related to repatriations of previously untaxed earnings during the repatriation tax holiday under the American Jobs Creation Act of 2004. We also document a significant increase in negative temporary BTDs related to bad debt expense and other amortization/impairment write-offs during the financial crisis in 2008 and 2009 when these two BTDs account for approximately 21 and 22 percent of total negative temporary BTDs, respectively. These findings are consistent with prior literature which argues BTDs arise for a variety of factors beyond tax planning (Hanlon and Heitzman, 2010; Desai and Dharmapala, 2006; Frank, Lynch, and Rego, 2009).³

Third, throughout the sample period some of the largest positive permanent and positive temporary BTDs are reported in *other income (loss)* and *other expense (deduction)* line items ("*other*" line items). One of the primary concerns with Schedule M-1 is that most of the information on specific BTDs is reported by taxpayers on supplemental schedules making it difficult to analyze BTDs for audit or compliance risk (Boynton and Mills, 2004). While Schedule M-3 contains over 60 account-specific line items, corporate taxpayers continue to report a large amount of their BTDs in the "*other*" categories.⁴ Specifically, we find 26.1 percent of all BTDs are classified under "*other*" line items in 2004, and this percentage trends downward to 15.9 percent in 2012, with a rebound to 21.9 percent in 2013. Thus, while significant amounts of BTDs are still reported on supplementary schedules we find this amount is decreasing over time, consistent with Schedule M-3 somewhat increasing transparency in BTD reporting.

Fourth, we examine reportable transactions (i.e., tax shelters) from 2004 to 2013. We find both the frequency and magnitude of positive BTDs related to tax shelters decrease

³ See Guenther (2014) for a discussion of papers using book-tax differences as a proxy for tax planning.

⁴ Similar to Schedule M-1 requirements, taxpayers are required to attach supplemental disclosures of specific components in the "*other*" line items when filing Schedule M-3.

from 2004 to 2009, primarily driven by a reduction in temporary BTDs related to tax shelter transactions. From 2009–2012, the number of reportable transactions levels off while the magnitude substantially increases driven by an increase in positive temporary BTDs from 2009 to 2011 and positive permanent BTDs from 2011 to 2012, followed by a large decline in 2013.

Finally, we examine book-tax differences related to foreign activity. We find financial accounting considerations continue to matter because permanent BTDs related to repatriations exceed temporary BTDs for most years. We also find that foreign earnings and repatriations subject to U.S. tax appear to be growing over the 2004–2013 period. However, the relative amount of foreign earnings repatriated decreases substantially after 2009.

II. BOOK-TAX DIFFERENCES

A. Total, Temporary, Permanent

Differences between book and taxable income arise because book income is generally calculated according to Generally Accepted Accounting Principles (GAAP) while taxable income is calculated according to the Internal Revenue Code (IRC). Book-tax differences are classified into two categories, temporary and permanent. Temporary differences reverse in future years and corporations accrue deferred tax liabilities (assets) for temporary differences that create future taxable (deductible) amounts under Accounting Standards Codification 740. Thus, temporary differences do not affect reported tax expense, the effective tax rate (ETR), or reported net income for book purposes, but tax planning strategies that generate positive (negative) temporary book-tax differences reduce (increase) cash taxes paid in the current period. The future reversal of positive (negative) temporary differences also implies cash taxes will increase (decrease) in future periods, all else equal. Therefore, the benefit of positive temporary differences is the deferral of cash tax payments. Permanent BTDs do not reverse, so firms do not accrue deferred tax balances for these differences. Permanent BTDs directly affect reported tax expense and thus affect the ETR, reported net income and cash taxes paid. A positive (negative) permanent BTD leads to a permanent decrease (increase) in both cash taxes paid and reported tax expense.

Therefore, tax planning strategies that generate permanent BTDs where taxable income is lower than book income typically are considered the perfect tax shelter (U.S. Department of the Treasury, 1999; McGill and Outslay, 2003, 2004; Boynton and Mills, 2004). The preference for permanent BTDs is also reflected in a recent survey of tax executives who report a preference for tax planning strategies that increase earnings per share (Graham et al., 2014).⁵ However, our study examines trends in permanent and temporary differences, as both have significant economic and reporting implications.

⁵ Blouin, DeBacker, and Sikes (2010) provide evidence of a negative correlation between permanent and temporary BTDs.

Prior studies primarily use estimates of book-tax differences as an indicator of aggressive tax and/or earnings management (e.g., U.S. Department of the Treasury, 1999; Hanlon, 2005; Hanlon and Heitzman, 2010). Using Schedule M-1 data from tax returns to construct a measure of pretax book income and taxable income, Treasury reports an increasing difference between book and tax income starting after 1992 and increasing through 1996. However, accurately measuring the level and sources of BTDs is challenging because of data constraints that historically limit researchers' ability to identify specific components of BTDs.⁶

Manzon and Plesko (2002) estimate the spread between book and tax incomes from 1989 to 1999 using financial statement disclosures. They report that relatively few variables explain BTDs, including changes in net sales reflecting growing firms investing in tax favored investments, depreciation and goodwill amortization differences, net operating loss utilization, and investments by firms operating in steady state replenishing their tax favored investments. The authors also examine the explanatory power of their model over time (using annual R^2) and conclude that the lack of a discernable pattern of increases in explanatory power is not consistent with increasing tax sheltering activity throughout their sample period. Alternatively, Desai (2003) constructs measures of book and tax income and components of each measure, using non-public data (i.e., confidential data from IRS and Bureau of Economic Analysis) from 1982 through 2000. His evidence suggests that by 1998 more than half of BTDs could not be accounted for by these historic determinants of BTDs. Desai (2003) also shows that unidentifiable sources of BTDs are at least partially explained by the use of tax shelters.⁷ Therefore, estimates of the components of BTDs across time lead to different conclusions regarding the sources and implications of BTDs.

B. The Role of Schedule M-3

Prior to Schedule M-3 taxpayers reported book-tax differences on Schedule M-1 of the tax return. Schedule M-1 requires only highly summarized information with details of many specific BTDs reported on supplementary schedules and therefore does not provide sufficient detail to identify the sources of specific BTDs (Mills and Plesko, 2003; Boynton and Mills, 2004; Boynton, DeFilippes, and Legel, 2005).⁸ Schedule

⁶ Desai (2003) discusses alternative methodologies to calculate book-tax differences, including the use of (1) economy-wide data from national income accounts, (2) reported tax and book income from tax forms, and (3) reported book income and simulated tax income from the accounting statements. He considers the advantages and disadvantages of each.

⁷ There is also a substantial literature exploring the consequences of conforming book and taxable income as a solution to the divergence between book and tax income (e.g., Manzon and Plesko, 2002; Hanlon, Laplante, and Shevlin, 2005; Blaylock, Gaertner, and Shevlin, 2015; Blaylock, Gaertner, and Shevlin, 2016). A discussion of this topic is beyond the scope of this paper.

⁸ Schedule M-3 is required to be filed by corporations with total assets at the end of the year equal to or greater than \$10 million. Corporations with less than \$10 million in total assets may continue to file Schedule M-1 or voluntarily file Schedule M-3. Statistics of Income data show that over the 2005–2007 time period 97.4 percent of all Subchapter C corporations file a Schedule M-3 (Boynton et al., 2011). The remaining corporations file Schedule M-1.

M-3 is designed to increase transparency between book and taxable income, facilitating identification of differences that arise from aggressive positions and resulting in more efficient audit selection (Internal Revenue Service, 2004). Consistent with Schedule M-3 disclosures providing information to tax authorities, Donohoe and McGill (2011) find firms reduced discretionary permanent BTDs before and after the implementation of Schedule M-3.

Part 1 of Schedule M-3 reconciles the financial statement reporting entity to the tax reporting entity. Parts 2 and 3 then reconcile book income to tax income for those entities that appear together on the tax return. Schedule M-3 also bifurcates all BTDs into temporary and permanent BTDs. Additionally, our dataset allows us to separate temporary and permanent BTDs into positive (i.e., taxable income lower than book income) and negative amounts (i.e., taxable income higher than book income). Thus, we directly investigate the underlying differences between book and tax income while reducing the noise that occurs when taxable income is estimated from the financial statements.⁹ Additionally, because we examine BTDs for the tax reporting entity rather than for the financial statement reporting entity, our study avoids a major issue associated with estimating BTDs from financial statement data (Hanlon, 2003). Finally, we investigate trends in specific BTDs that vary in audit risk (i.e., the likelihood that a tax reporting position is challenged and sustained upon audit).

III. DATA

We begin our study of the trends in sources of book-tax differences with aggregated Schedule M-3 tax return data for all Subchapter C corporations from 2004 through 2013.¹⁰ Our data include both publicly and privately-held C corporations that file a Schedule M-3. Prior studies using portions of this data include Boynton, DeFilippes, Legel, and Reum (2011) and Boynton, DeFilippes, Legel, and Rupert (2015). We calculate total book-tax differences by adding temporary and permanent book-tax differences listed in columns (b) and (c) of Parts II and III of the Schedule M-3.¹¹ Consistent with prior research, we remove all BTDs related to federal tax expense from our analyses.¹² We also examine permanent and temporary differences individually.

We follow prior BTD literature in defining book-tax differences as pretax GAAP book income minus taxable income (Manzon and Plesko, 2002), and classifying BTDs that cause taxable income to be lower (higher) than book income as positive (negative) BTDs.

⁹ Noise arises for a variety of reasons including earnings management through tax accruals.

¹⁰ Schedule M-3 First Look data sets are based on data from Corporation Statistics of Income. The data sets were developed by the Boynton-DeFilippes-Legel Schedule M-3 research team within LB&I/IRS and OTA/Treasury. Schedule M-3 data sets may be requested directly to charles.e.boynton@irs.gov.

¹¹ We sum specific line items to generate totals rather than using the Schedule M-3 Part II line 30 reconciliation totals line item. We also include six items in total BTD measures including Part II lines 29b and 29c, and four reconciling amounts that are necessary to correct for taxpayer summation errors.

¹² We exclude book-tax differences arising from federal tax expense, located on Part III lines 1 & 2 of the Schedule M-3, because federal tax expense is an expense on financial statements but is not deductible for tax purposes. This exclusion allows us to compare book and taxable incomes on a pretax basis and is consistent with prior literature (Manzon and Plesko, 2002; Boynton, DeFilippes, and Legel, 2006, 2008).

Under this classification, positive (negative) BTDs are favorable (unfavorable) in the current period as they reduce (increase) cash tax payments on the current year tax return. Thus, throughout our analysis, in addition to partitioning BTDs into permanent and temporary differences, we also partition them into positive and negative differences.¹³ When examining sources of BTDs, our variables follow individual line items from Schedule M-3 and include all pretax line items in Parts II and III of the Schedule M-3.

IV. RESULTS

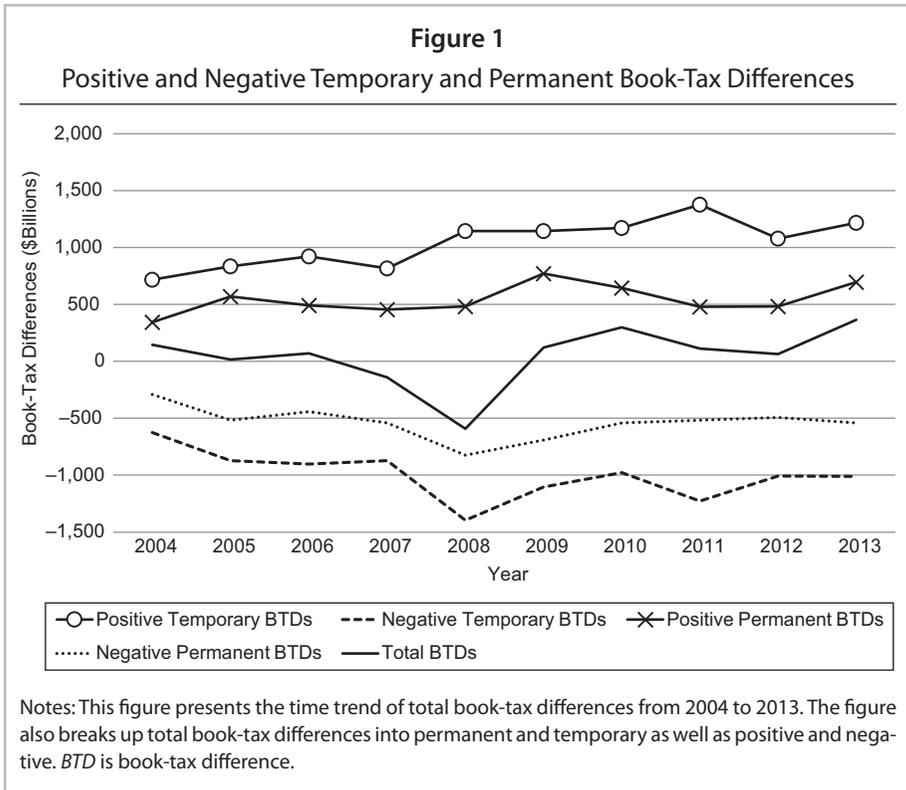
We begin our examination with overall trends in book-tax differences, and then we examine details underlying these trends. Our primary analysis examines four categories of differences: positive permanent, positive temporary, negative permanent, and negative temporary (Figure 1). We compute the total of each of the four categories by summing the total reported amounts on each of the specific line items. We then explore the five largest specific book-tax differences in each category (Figures 2–5), the absolute value of “*other*” BTDs in Figure 6, reportable transactions in Figure 7, and foreign earnings in Figure 8.

A. Total Positive and Negative Permanent and Temporary Differences

Figure 1 displays the aggregate trends in the four primary categories of book-tax differences: positive permanent, negative permanent, positive temporary, and negative temporary. Positive book-tax differences trend upward from 2004 to 2013, with permanent differences increasing from around \$345 billion to about \$697 billion and temporary differences moving from \$719 billion to over \$1,219 billion. Thus, temporary positive differences generally exceed permanent positive differences. Overall, these trends are consistent with the decreasing trend in cash effective tax rates documented in Dyreng et al. (forthcoming).

Figure 1 also shows a negative trend in negative book-tax differences over our sample period. Permanent negative differences decrease from just under –\$291 billion in 2004 to around –\$825 billion in 2008. Temporary negative differences decrease from –\$627 billion in 2004 to –\$1,396 billion in 2008. Permanent negative BTDs later rise to –\$541 billion in 2013, while temporary negative BTDs subsequently increase to –\$1,009 billion in 2013. Permanent negative differences exceed permanent positive differences in 2007, 2008, 2011, and 2012. Temporary negative differences surpass temporary positive differences in 2005, 2007, and 2008. These results appear to track events in the economy, and have the opposite effect on cash effective tax rates as positive book-tax differences. However, positive differences outweigh negative differences for each year across the sample period other than 2007 and 2008, implying that total book-tax differences remain mostly positive as reflected in the “total line.”

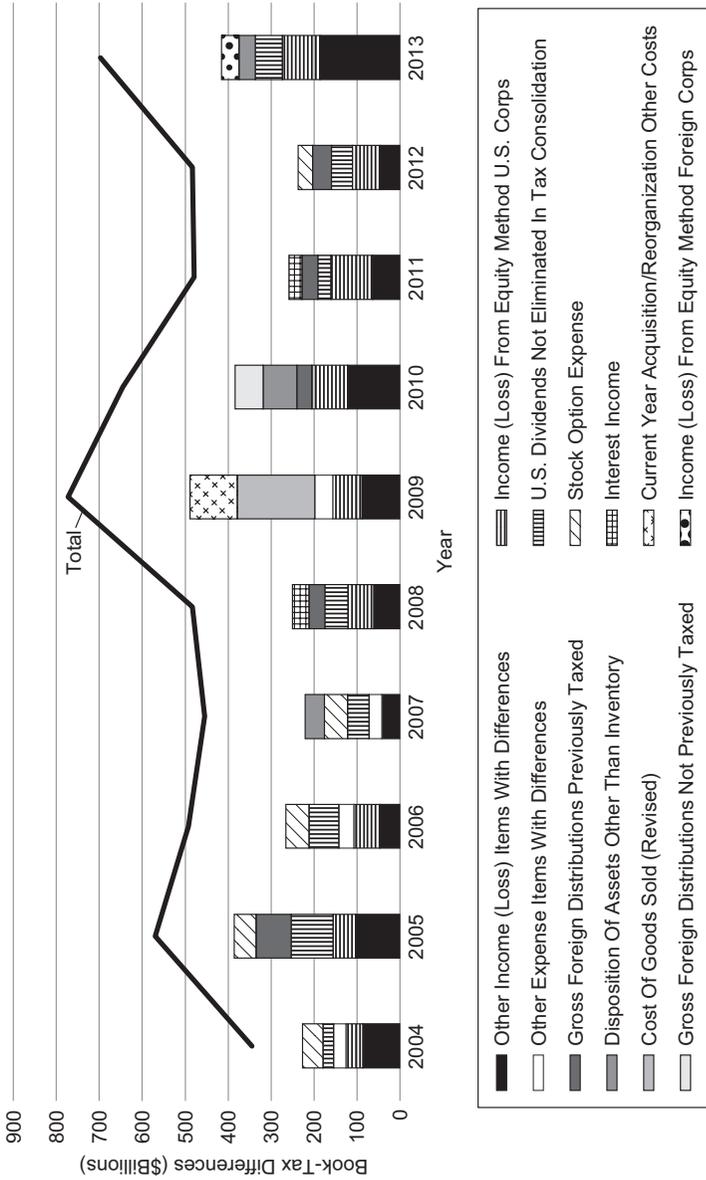
¹³ Corporations can report a mixture of positive and negative permanent BTDs and a mixture of positive and negative temporary BTDs (Boynton et al., 2011). This can result in offsetting in determining the BTDT totals at the taxpayer level. Thus, our aggregations of the individual line items for positive and negative BTDTs within the permanent and temporary differences will differ from the aggregated BTDTs reported by the taxpayer.



B. Positive Permanent Differences

Figure 2 presents the composition and magnitude of the top five positive permanent book-tax differences for each year. Consistent with prior research that uses M-1 data, we find *equity method earnings* and *dividends not eliminated in tax consolidation* are two of the largest reported positive permanent book-tax differences (Boynton, DeFilippes, Lisowsky, and Mills, 2004; Boynton, DeFilippes, and Legel, 2005). Combined, they comprise anywhere from 8.8 to 26 percent of total positive permanent book-tax differences. *Stock option expense* is one of the top five permanent book-tax differences in 2004–2007 and in 2012, likely reflecting the exercise of options granted before June 2005 when the financial accounting rules for stock options were revised to treat stock option compensation as a temporary difference (SFAS 123R). Prior to the change, companies were not required to record an expense on their financial statements for stock options, yet they received a tax deduction for the options in the year they were exercised resulting in a permanent book-tax difference (Hanlon and Shevlin, 2002). *Previously taxed foreign distributions* are also consistently among the top five positive differences (2005, 2008, 2010–2012).

Figure 2
Positive Permanent Book-Tax Differences



Notes: The bars in this figure present the top five sources of positive permanent book-tax differences each year, while the line presents total positive permanent book-tax differences.

In each year during our sample period, positive permanent book-tax differences categorized as *other income (loss)* (Schedule M-3 Part II Line 25) are one of the top five positive permanent differences. *Other expense/deduction items with differences* (Schedule M-3 Part III Line 37) appears in the top five in 2004, 2006, 2007, and 2009. Combined, these “*other*” categories make up approximately 33 percent of total positive permanent differences in 2004, but decrease to approximately 9 percent by 2012, and rebound to 26 percent in 2013. This suggests that while taxpayers continued to report large amounts of BTDs on supplemental schedules similar to the Schedule M-1 regime, the decrease over time is generally consistent with an increase in transparency to U.S. tax authorities following the introduction of Schedule M-3.¹⁴

C. Positive Temporary Differences

Figure 3 presents the composition and magnitude of the top five positive temporary book-tax differences for each year. Unsurprisingly, *depreciation* makes the top five every year and is the largest temporary category in 2004 (2011), comprising over 19 percent (17 percent) of the total positive temporary differences. These spikes coincide somewhat with generous bonus depreciation rules that allowed for immediate expensing of up to 50 percent (100 percent) of qualified purchases in 2004 (2011). *Income statement disposition of assets* (Part II Line 23) enters the top five in 2004–2007, 2009, 2012, and 2013 and represents temporary differences arising from the disposition of non-inventory assets when the book basis is lower than the tax basis. This difference likely arises due to fair-value accounting adjustments that reduce book basis prior to realization for tax purposes (PWC, 2008) and ranges from just under 7 to over 14 percent of the total temporary differences in the years it is included.^{15, 16}

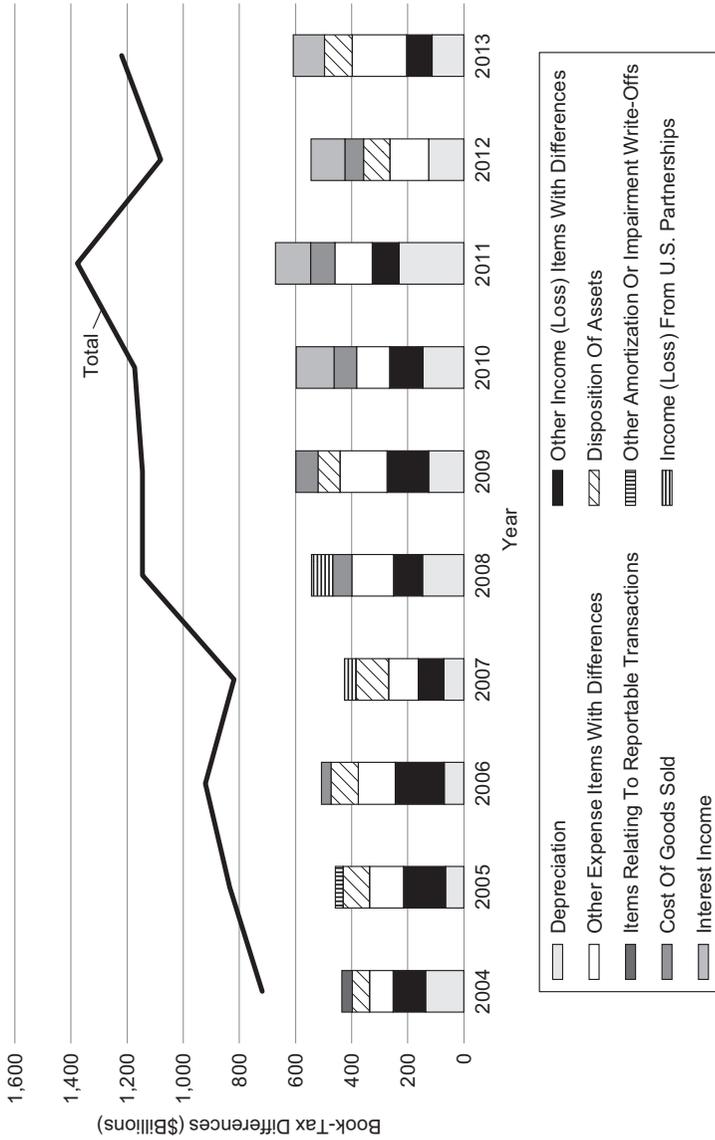
Other important positive temporary differences include *interest income* (Part II line 13), which appears in 2010–2013 and is consistently quite large at about 10 percent of total temporary differences. It is difficult to pinpoint the primary source of the interest income that is reported in book income but not on the tax return in these years, as this interest income is reported on Schedule 8916-A and might be derived from (1) hybrid securities, (2) sale or leases, (3) intercompany interest income from outside or inside

¹⁴ *Cost of Goods Sold (revised)* (Schedule M-3 Part II line 17) appears only once in the top five, in 2009, yet it is the largest category that year (approximately 17 percent of the total). Unfortunately, it is difficult to identify the source of the spike in this line item because the detail is included in Form 8916-A which lists 18 possible reasons for book-tax differences. The second largest category in 2009 is *Current Year Acquisition / Reorganization Other Costs* (Schedule M-3 Part III line 25), which is approximately 14 percent of total positive permanent differences and also makes its sole appearance that year. This item includes expenses related to taxable or tax-free acquisitions of property or a tax-free reorganization other than investment banking fees, legal fees, or accounting fees included elsewhere on the form.

¹⁵ PricewaterhouseCoopers LLP (PWC), “Fair Value Accounting: Tax Considerations,” December 15, 2008, https://www.pwc.com/us/en/washington-national-tax/assets/fair_tax_accounting.pdf.

¹⁶ Similar to permanent differences described above, *cost of goods sold* (Part II line 17) also enters the top five, but is included more often in 2006, 2008–2012.

Figure 3
Positive Temporary Book-Tax Differences



Notes: The bars in this figure present the top five sources of positive temporary book-tax differences each year, while the line presents total positive temporary book-tax differences.

the tax affiliated group, or (4) other interest income. However, given interest income only starts to appear consistently in 2010, it might signal a change in the way firms are financing operations.¹⁷ The last few differences in this group include *income (loss) from U.S. partnerships* (Part II Line 9) that appears in 2007 and 2008, *other amortization or impairment write-offs* (Part III Line 28) that appears in 2005 as barely over 3 percent of the total, and *items related to reportable transactions* that appears in 2004 as approximately 5 percent of the total. The reportable transaction finding is consistent with idea that corporations began avoiding recognized tax shelter transactions, perhaps out of reputational concerns (e.g., Hanlon and Slemrod, 2009). We specifically investigate the trend in reportable transactions below.

Finally, *other income (loss) items with differences* (Part II line 25) and *other expense/ deductions items with differences* (Part III line 37) make up a substantial portion of positive temporary differences each year. Combined, they represent anywhere from just under 13 percent of the total in 2012 to 33 percent in 2006. Given that “*other*” line items represent the lowest percentages of total temporary positive book-tax differences in the last three years, one could infer that taxpayers are improving their ability to identify appropriate line items which would otherwise be categorized as “*other*.” Alternatively, the forms could be evolving to meet the needs of more taxpayers. Both scenarios suggest the Schedule M-3 is providing more detail on specific BTDs in a machine readable format, potentially enhancing the efficiency of the audit selection process.

D. Negative Permanent Differences

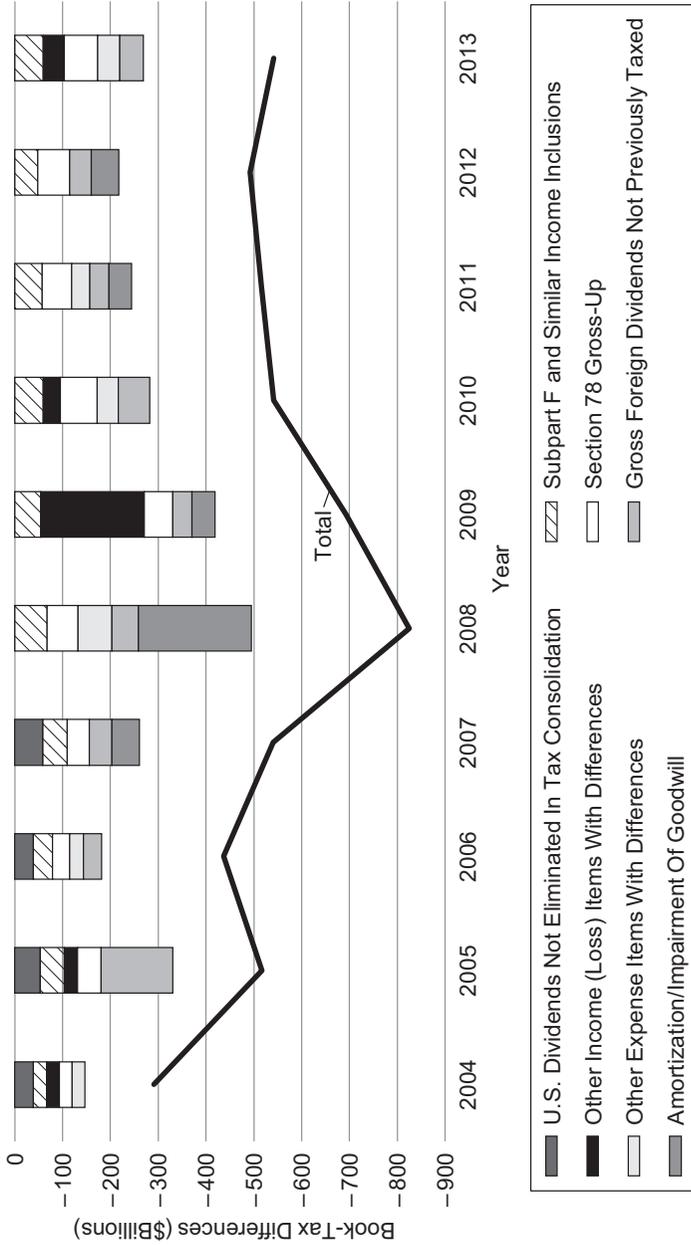
Figure 4 presents the composition and magnitude of the top five negative permanent book-tax differences for each year. It is apparent from this graph that foreign operations play a significant role in this category, as evidenced by the persistent appearance of three categories: (1) *gross foreign dividends not previously taxed* (Part II Line 2), (2) *subpart F, QEU, and similar income inclusions* (Part II Line 3), and (3) *section 78 gross up* (Part II Line 4). Combined, these categories comprise from 18 to 48 percent of total negative permanent book-tax differences across the sample period. Individually, *gross foreign dividends not previously taxed* dominate in 2005, representing 29 percent of the total negative permanent BTDs, consistent with repatriations under the American Jobs Creation Act of 2004.

Book-tax differences from *amortization/impairment of goodwill* (Part III Line 26) appear in 2007–2009 and 2011–2013. They make up 29 percent of total negative permanent book-tax differences in 2008 and likely arise from impairment of goodwill recorded on the financial statements from a previous non-taxable acquisition where the tax basis in the goodwill is zero.

Unlike the other categories of book-tax differences, “*other*” line items play a less prominent role in permanent negative differences, except in 2009. In 2009, this item

¹⁷ Form 8916-A expanded in 2007 to include details related to *interest income* (Form 8916-A Part II) and *interest expense* (Form 8916-A Part III).

Figure 4
Negative Permanent Book-Tax Differences



Notes: The bars in this figure present the top five sources of negative permanent book-tax differences each year, while the line presents total negative permanent book-tax differences.

represents approximately 31 percent of the total negative permanent book-tax difference. Given the timing and lack of access to supporting documentation, we speculate this is related to the financial crisis.

E. Negative Temporary Differences

Figure 5 presents the magnitude of the top five negative temporary BTDs for each year. Negative temporary BTDs are relatively stable from 2004 to 2007 and then increase by about one third in 2008 and 2009, fueled by what appears to be bad debt accruals and impairment charges on the financial statements that are deductible for tax only upon realization. *Bad debt expense* and *other amortization/impairment write-offs* account for approximately 21 percent and 22 percent of total negative temporary BTDs in 2008 and 2009, respectively. *Cost of goods sold* (2004–2011), *gross capital gains* (2004–2007, 2010–2012), *net gain/loss on form 4797* (2005–2007) and *interest expense* (2010–2012) also appear frequently in the top five negative temporary BTDs.¹⁸

The “*other*” line items appear in the top five negative temporary BTDs every year from 2004 to 2013, accounting for 24 percent (26 percent) of negative temporary BTDs in 2004 (2011), and ranging from 12 percent to 24 percent of the total negative temporary BTDs in the rest of the period. We explore the “*other*” category specifically in the next figure.

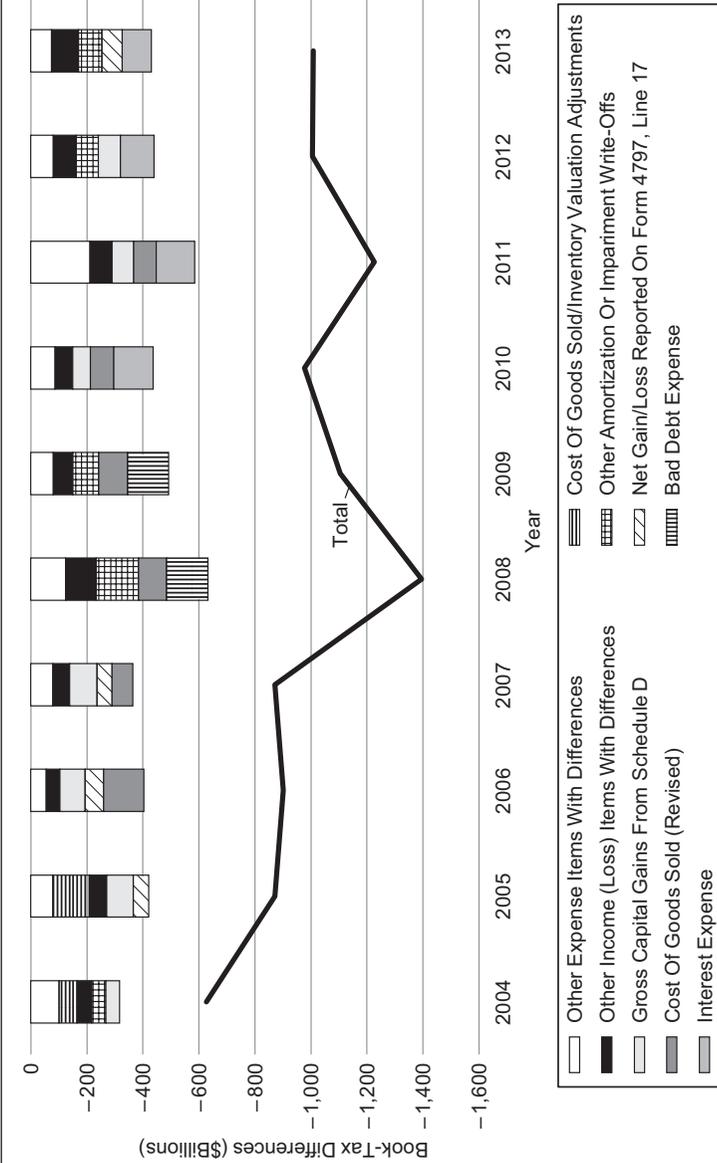
F. Trend in “Other” Line Items

According to Boynton and Mills (2004), one of the key reasons for introducing Schedule M-3 was the high-level aggregation of information reported in Schedule M-1. Figures 2–5 reveal that the “*other*” category continues to comprise a significant portion of reported book-tax differences.¹⁹ Therefore, in Figure 6, we examine yearly fluctuations in the absolute value of all BTDs classified under “*other*” categories as a percentage of the absolute value of all reported BTDs. Using the absolute value of these measures ensures that we capture all the activity in aggregate accounts, without the obfuscation that takes place when these amounts are netted against each other. In 2004, 26.1 percent of all BTDs are classified under “*other*” income or expense line items. However, Figure 6 shows an overall decrease in the amount of BTDs reported as “*other*,” falling to 21.9 percent by 2012, with increases to 23 percent during the financial crisis in 2009 and to 21.9 percent in 2013. Therefore, while a significant portion of

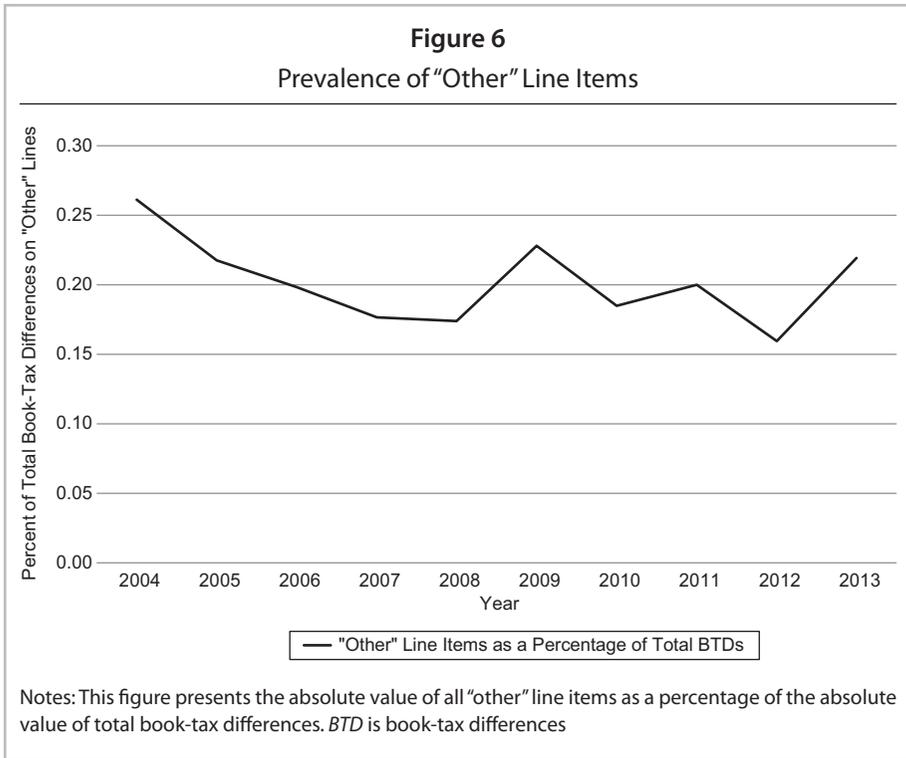
¹⁸ Negative temporary differences often arise on the sale of depreciable assets due to accelerated depreciation methods that are used for tax purposes (e.g., MACRS, §179, bonus depreciation). The increase in the prevalence of these BTDs immediately following the enactment of larger §179 and bonus depreciation provisions is consistent with this reasoning.

¹⁹ Common items likely reported on the “*other*” line items include sales revenue, rental income, selling, general and administration costs, and other items that likely generate BTDs that do not have a specific line item on Schedule M-3.

Figure 5
Negative Temporary Book-Tax Differences



Notes: The bars in this figure present the top five sources of negative temporary book-tax differences each year, while the line presents total negative temporary book-tax differences.

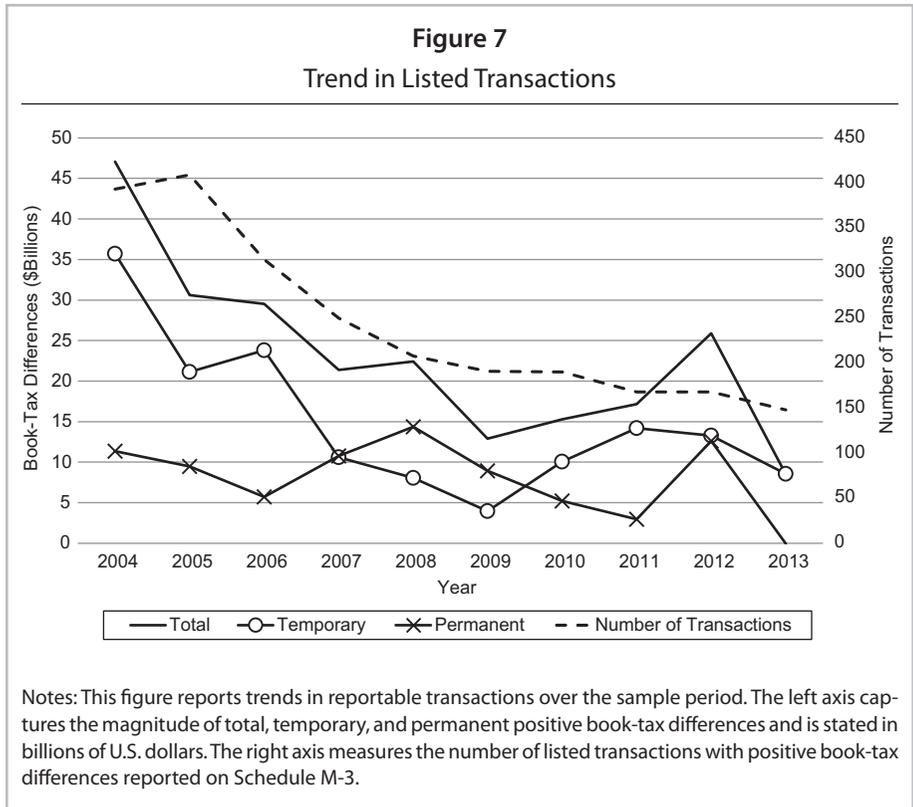


BTDs continue to be reported under "other," the trend suggests that the Schedule M-3 increases transparency in BTD reporting.

G. Trend in Reportable Transactions

Figure 7 examines the magnitude (left axis) and frequency (right axis) of positive BTDs related to reportable (i.e., tax shelter) transactions. Except for 2008, temporary differences comprise the majority of reported book-tax differences related to reportable transactions, even though permanent differences are generally preferable (McGill and Outslay, 2004; Graham et al., 2014).²⁰ In addition, both the magnitude and frequency of positive BTDs related to tax shelter transactions decreases from 2004 to 2009. Specifically, total positive book-tax differences related to reportable transactions decrease from about \$47 billion in 2004 to under \$13 billion in 2009, due to lower temporary positive BTDs, with a rebound to \$26 billion in 2012, driven by an increase in posi-

²⁰ IRC §165 loss transactions in excess of \$10 million in any single tax year, or \$20 million in any combination of tax years are considered reportable transactions.



tive temporary differences (2009–2011) and an increase in positive permanent BTDs (2011–2012). However, in 2013 we observe a sharp decrease in total positive BTDs related to reportable transactions due to the disappearance of related permanent BTDs.

We also document a steady decline in the *number* of reportable transactions with positive BTDs, from around 400 to 200, between 2004 and 2009.²¹ The trend is consistent with increased disclosure requirements of Form 8886 and Schedule M-3 reducing tax sheltering activity. The KPMG deferred prosecution agreement in 2003 and the implementation of the Sarbanes-Oxley in 2003–2004 also potentially contribute to the trend. The upturn in the *magnitude* of positive BTDs related to listed transactions coupled with the declining frequency from 2009 to 2012 speaks to an increase in size of each reportable transaction. However, the sharp decrease in positive BTDs in 2013 suggests a recent reluctance to engage in these transactions.

²¹ For a chronological list of tax shelters, see Internal Revenue Service, “Recognized Abusive and Listed Transactions,” <https://www.irs.gov/Businesses/Corporations/Listed-Transactions>.

H. Trend in Foreign Operations

Negative book-tax differences provide some evidence of the trends in foreign operations from 2004 to 2013. As discussed in Figure 5, three specific categories related to foreign operations comprise a substantial percentage of this category. In this section, we further explore what the summary Schedule M-3 data reveal about foreign operations.

The first result is that financial reporting matters (e.g., Erickson, Hanlon, and Maydew, 2004; Graham et al., 2014). Evidence supporting this conjecture is gleaned from the relative level of permanent versus temporary *gross foreign dividends not previously taxed* reported on Part II Line 2, representing the gross (before withholding tax) dividends from foreign subsidiaries included in current year taxable income.²² Presumably permanent negative differences for this item represent dividends included in book income in a previous period and deemed “permanently reinvested” under APB 23, thereby requiring no accrual of deferred tax expense on the financial statements and resulting in a lower effective tax rate in the year the income is earned. Temporary negative differences for this item represent dividends included in book income in a previous period for which a deferred tax liability was accrued on the financial statements. Relatively more permanent differences are consistent with financial reporting choices favoring lower effective tax rates in a prior period.²³ The ratio of permanent to temporary amounts for Part II Line 2 across the sample period equals 5.9, and ranges from a high of 14.2 in 2005 when firms repatriated foreign earnings under the American Jobs Creation Act (AJCA) of 2004, to a low of 0.08 in 2010, the only year the ratio slips below one.

Second, *Subpart F, QEF, and similar income exclusions* (Part II Line 3) represents passive income earned in a controlled foreign corporation for which tax deferral is not allowed, such as dividends, interest, rents and royalties, and any deemed repatriations under IRC §956. The trend reflects increasing negative BTDs after the 2004 AJCA tax holiday until the financial crisis of 2008, followed by a tapering off consistent with firms using overseas cash for operating purposes when alternative bank financing becomes more difficult to obtain, the use of cash in foreign acquisitions (Edwards, Kravet, and Wilson, 2016; Hanlon, Lester, and Verdi, 2015), or lower returns on passive assets.

The third category related to foreign operations that is regularly included in the top five negative permanent book-tax differences is *section 78 gross-up* from Part II, Line 4. IRC §78 requires a U.S. taxpayer to include as “dividend income” the foreign taxes paid or deemed paid on dividends received from a foreign subsidiary. The gross up is necessary for the foreign tax credit to work properly. For example, if a foreign subsidiary earns \$1,000 and pays \$300 of foreign taxes, it has \$700 to remit as a dividend to its U.S. parent. When the \$700 is remitted to the parent as a dividend, §78 requires a gross up of the \$300 foreign taxes deemed paid by the U.S. parent, making it appear as though the parent receives a \$1,000 dividend. The foreign tax credit allowed is limited to 35 percent of the dividend received, or \$350, instead of the \$245 ($=700 \times 0.35$) that would otherwise result if the dividend were not grossed up. The gross-up is captured

²² We assume amounts reported on Schedule M-3 properly reflect financial accounting treatment related to Accounting Principles Board (APB) 23.

²³ The pattern of the relative ratio of permanent to temporary differences is also consistent with changing growth prospects of overseas versus domestic operations as reflected in the larger economy.

on Part II, Line 4, and is one of the five biggest permanent book-tax differences each year. Given the decrease in foreign tax rates over the sample period, the magnitude of this line item is increasing, consistent with firms repatriating relatively more overseas earnings each year.^{24, 25}

To provide some indication of the relevance of estimated repatriations, in Figure 8 we plot an estimate of the gross amount of foreign repatriations against the reported overseas earnings *not* included in the taxable entity in the current year (from Part I, Line 5). To calculate the former, we divide the amount of Part II line 4 by a 25 percent tax rate.²⁶ The latter amount reflects a total increase in overseas earnings of foreign operations for our sample firms and is consistent with research, anecdotal evidence,



²⁴ Hodge, Scott A., and Andre Dammert, "U.S. Lags while Competitors Accelerate Corporate Income Tax Reform," Tax Foundation, August 5, 2009, <http://taxfoundation.org/article/us-lags-while-competitors-accelerate-corporate-income-tax-reform>.

²⁵ IRC §78 gross up does not include repatriations under the AJCA 2004 because these dividends were subject to an 85 percent dividend received deduction and any associated foreign taxes paid or deemed paid were not eligible for the foreign tax credit (IRC §965).

²⁶ Our data do not allow us to estimate the weighted average foreign tax rate. Thus, we chose 25 percent based on estimates reported in Pomerleau (2014) who derives estimates from IRS Form 1118. This is likely a conservative estimate, given recent evidence supporting a lower tax rate on foreign earnings (e.g., Citizens for Tax Justice, 2016). Our choice of tax rate does not affect the increasing trend in the amounts reported in Part II, Line 4.

and policymakers' concerns regarding increasing foreign earnings (Keightley, 2013; Klassen and Laplante, 2012; Pomerleau, 2014). Figure 8 shows, for our sample, that a substantial amount of total foreign earnings appears to be repatriated each year. From 2004 to 2013 repatriations generally increase; however, after 2009 the relative amount of repatriations decreases due to a marked increase in total foreign earnings.

V. CONCLUSION

We use a time-series of aggregate annual Schedule M-3 tax return data from Subchapter C corporations to provide descriptive evidence on specific sources of permanent and temporary book-tax differences from 2004 to 2013. Schedule M-3 was designed to increase transparency of book-tax differences to improve the identification of aggressive tax planning strategies, thereby increasing audit efficiency. Our is the first study, to our knowledge, to use the detailed Schedule M-3 data to investigate trends in specific BTDs. We identify five primary findings.

First, we find an overall increase in BTDs over the sample period. This is due to an increase in positive permanent BTDs that lower effective tax rates and to a large increase in negative book-tax differences at the time of the financial crisis. Second, we find that many BTDs arise from firm operating and financing fundamentals, tax law changes, or economy-wide economic events. This suggests BTDs, considered in isolation, are incomplete measures of tax avoidance. Third, we document a decreasing trend in amounts included in "other" line items, suggesting improved transparency of BTD reporting across the sample period. The Schedule M-3 was adopted in part because of the lack of information provided by the prior Schedule M-1, and our findings demonstrate potential improvement in the transparency of reported BTDs. Fourth, given prior concerns over tax shelter abuse by U.S. corporations, we also examine *reportable transactions* and find a decrease in their use. Finally, we document an overall increase in foreign earnings and repatriations subject to U.S. tax over the 2004–2013 period, although the relative amount of foreign earnings repatriated decreases substantially after 2009.

ACKNOWLEDGMENTS AND DISCLAIMERS

We thank Charles Boynton, Portia DeFilippes, and Ellen Legel for providing access to summarized Schedule M-3 data. We have benefitted from comments from Charles Boynton, Danielle Green, Sanjay Gupta, Gil Manzon (discussant), George Plesko, Ed Outslay, and participants at the 2016 Spring Tax Symposium of the National Tax Association. We thank Mathias Krueckeberg for excellent research assistance. All errors are our own.

DISCLOSURES

The authors have no financial arrangements that might give rise to conflicts of interest with respect to the research reported in this paper.

REFERENCES

- Blaylock, Bradley, Fabio Gaertner, and Terry Shevlin, 2015. "The Association between Book-Tax Conformity and Earnings Management." *Review of Accounting Studies* 20 (1), 141–172.
- Blaylock, Bradley, Fabio Gaertner, and Terry Shevlin, forthcoming. "Book-Tax Conformity and Capital Structure." *Review of Accounting Studies*, forthcoming.
- Blouin, Jennifer, Jason DeBacker, and Stephanie Sikes, 2010. "Temporary and Permanent Book-Tax Differences: Complements or Substitutes?" In *Proceedings of the 2010 IRS Research Conference*, 21–45. Internal Revenue Service, Washington, DC.
- Boynton, Charles, Portia DeFilippes, and Ellen Legel, 2005. "Prelude to Schedule M-3: Schedule M-1 Corporate Book-Tax Difference Data 1990–2003." *Tax Notes* 109 (December 19), 1579–1599.
- Boynton, Charles, Portia DeFilippes, and Ellen Legel, 2006. "A First Look at 2004 Schedule M-3 Reporting by Large Corporations." *Tax Notes* 112 (September 11), 943–981.
- Boynton, Charles, Portia DeFilippes, and Ellen Legel, 2008. "A First Look at 2005 Schedule M-3 Reporting by Large Corporations." *Tax Notes* 121 (November 3), 564–573.
- Boynton, Charles, Portia DeFilippes, Ellen Legel, and Todd Reum, 2011. "A First Look at 2007 Schedule M-3 Reporting by Large Corporations." *Tax Notes* 132 (August 15), 689–725.
- Boynton, Charles, Portia DeFilippes, Ellen Legel, and Lisa Rupert, 2015. "Schedule M-3 Profiles of Schedule UTP Filers by IRC Section Cited." *Tax Notes* 149 (October 12), 249–300.
- Boynton, Charles, Portia DeFilippes, Petro Lisowsky, and Lillian F. Mills, 2004. "Consolidation Anomalies in Form 1120 Corporate Tax Return Data." *Tax Notes* 104 (July 26), 405–417.
- Boynton, Charles, and Lillian F. Mills, 2004. "The Evolving Schedule M-3: A New Era of Corporate Show and Tell?" *National Tax Journal* 57 (3), 757–772.
- Citizens for Tax Justice, 2016. "Fortune 500 Companies Hold a Record \$2.4 Trillion Offshore." Citizens for Tax Justice, Washington, DC, <http://ctj.org/pdf/pre0316.pdf>.
- Desai, Mihir A., 2003. "The Divergence between Book Income and Tax Income." In Poterba, James (eds.), *Tax Policy and the Economy, Volume 7*, 169–208. MIT Press, Cambridge, MA.
- Desai, Mihir A., and Dhammika Dharmapala, 2006. "Corporate Tax Avoidance and High-powered Incentives." *Journal of Financial Economics* 79 (1), 145–179.
- Donohoe, Michael P., and Gary A. McGill, 2011. "The Effects of Increased Book-Tax Difference Tax Return Disclosures on Firm Valuation and Behavior." *Journal of the American Taxation Association* 33 (2), 35–65.
- Dyregang, Scott D., Michelle Hanlon, Edward L. Maydew, and Jacob R. Thornock, forthcoming. "Changes in Corporate Effective Tax Rates over the Past 25 Years." *Journal of Financial Economics*.

Edwards, Alexander, Todd Kravet, and Ryan Wilson, 2016. "Trapped Cash and the Profitability of Foreign Acquisitions." *Contemporary Accounting Research* 33 (1), 44–77.

Erickson, Merle, Michelle Hanlon, and Edward L. Maydew, 2004. "How Much Will Firms Pay for Earnings That Do Not Exist? Evidence of Taxes Paid on Allegedly Fraudulent Earnings." *Accounting Review* 79 (2), 387–408.

Frank, Mary Margaret, Luann Lynch, and Sonja Rego, 2009. "Tax Reporting Aggressiveness and Its Relation to Aggressive Financial Reporting." *Accounting Review* 84 (2), 467–496.

Graham, John, Michelle Hanlon, Terry Shevlin, and Nemit Shroff, 2014. "Incentives for Tax Planning and Avoidance: Evidence from the Field." *Accounting Review* 89 (3), 991–1023.

Green, Danielle, and George Plesko, 2016. "Regulatory Changes and the Properties of Book and Taxable Income." Paper presented at National Tax Association 46th Annual Spring Symposium, May 12, Washington, DC.

Guenther, David, 2014. "Measuring Corporate Tax Avoidance: Effective Tax Rates and Book-Tax Differences." Working Paper. University of Oregon, Eugene, OR.

Hanlon, Michelle, 2003. "What Can We Infer about a Firm's Taxable Income from its Financial Statements?" *National Tax Journal* 56 (4), 831–863.

Hanlon, Michelle, 2005. "The Persistence and Pricing of Earnings, Accruals, and Cash Flows when Firms Have Large Book-Tax Differences." *Accounting Review* 80 (1), 137–166.

Hanlon, Michelle, and Shane Heitzman, 2010. "A Review of Tax Research." *Journal of Accounting and Economics* 50 (2–3), 127–178.

Hanlon, Michelle, Stacie K. Laplante, and Terry Shevlin, 2005. "Evidence for the Possible Information Loss of Conforming Book Income and Taxable Income." *Journal of Law and Economics* 48 (2), 407–442.

Hanlon, Michelle, and Terry Shevlin, 2002. "Accounting for Tax Benefits of Employee Stock Options and Implications for Research." *Accounting Horizons* 16 (1), 1–16.

Hanlon, Michelle, and Joel Slemrod, 2009. "What does Tax Aggressiveness Signal? Evidence from Stock Price Reactions to News about Tax Shelter Involvement." *Journal of Public Economics* 93 (1–2) 126–141.

Hanlon, Michelle, Rebecca Lester, and Rodrigo Verdi, 2015. "The Effect of Repatriation Tax Costs on U.S. Multinational Investment." *Journal of Financial Economics* 116 (1), 179–196.

Henry, Erin, Norman Massel, and Erin Towery, 2016. "The Consequences of Increased Tax Disclosures: A Comparison of Domestic and Multinational Firms." *National Tax Journal* 69 (4), 809–830.

Internal Revenue Service, 2004. "Treasury and IRS Propose New Tax Form for Corporate Tax Returns." Internal Revenue Service, Washington, DC, <https://www.irs.gov/uac/treasury-and-irs-propose-new-tax-form-for-corporate-tax-returns>.

Keightley, Mark, 2013. *An Analysis of Where American Companies Report Profits: Indications of Profit Shifting*. CRS Report R42927. Congressional Research Service, Washington, DC.

Klassen, Kenneth, and Stacie K. Laplante, 2012. “Are U.S. Multinational Corporations Becoming More Aggressive Income Shifters?” *Journal of Accounting Research* 50 (5), 1245–1286.

Manzon, Jr., Gil B., and George A. Plesko, 2002. “The Relation Between Financial and Tax Reporting Measures of Income.” *Tax Law Review* 55 (2), 175–214.

McGill, Gary A., and Edmund Outslay, 2003. “Enron: The Joint Tax Committee’s Investigative Report.” Testimony, February 13. U.S. Senate, Committee on Finance, Washington, DC.

McGill, Gary A., and Edmund Outslay, 2004. “Lost in Translation: Detecting Tax Shelter Activity in Financial Statements.” *National Tax Journal* 57 (3), 739–756.

Mills, Lillian F., and George A. Plesko, 2003. “Bridging the Reporting Gap: A Proposal for More Informative Reconciling of Book and Tax Income.” *National Tax Journal* 56 (4), 865–893.

Pomerleau, Kyle, 2014. “How Much Do U.S. Multinational Corporations Pay in Foreign Income Taxes?” Tax Foundation, Washington, DC, <http://taxfoundation.org/article/how-much-do-us-multinational-corporations-pay-foreign-income-taxes>.

Raedy, Jana S., Douglas A. Shackelford, and Jeri Seidman, 2012. “Book-Tax Differences and Earnings Characteristics — Which Differences Matter for Earnings Growth?” Working Paper. University of North Carolina, Chapel Hill, NC.

Seidman, Jeri, 2010. “Interpreting the Book-Tax Income Gap as Earnings Management or Tax Sheltering.” McCombs Research Paper Series No. ACC-02-10. University of Texas at Austin, Austin, TX.

U.S. Department of the Treasury, 1999. *The Problem of Corporate Tax Shelters: Discussion, Analysis, and Legislative Proposals*. Government Printing Office, Washington, DC.

