

Trends in Book-Tax Income and Balance Sheet Differences

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Introduction.

- IRS / LMSB Research Project to develop and refine Book-Tax measures of compliance risk
 - Collect and merge financial and tax return data
 - Account for known differences such as
 - Consolidation issues
 - Non-qualified stock options
 - Correlate differences with tax deficiencies to refine indicators of compliance risk
- Current paper is progress report describing aggregate statistics.

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Context of research study

- See paper for theoretical discussion of book-tax rules and incentives.
- We confirm much prior work on book-tax income differences.
 - Dworin (1985 Tax Notes), Mills (JAR 1998), Treasury white paper (1999), Mills and Newberry (2001 JATA), Hanlon and Shevlin (2002 AH), Manzon and Plesko (2002 NYU), Plesko (2002 SOI Bulletin), Desai (2002 working paper), Boynton et al. (2002).
- We present first evidence on book-tax balance sheet differences.

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A few details on prior work

- Dworin (1985) – consolidation issues, mentions cushion
- Mills (1998) – proposed audit adjustments = $+f(\text{book-tax income differences})$. Crude controls for foreign income, NPPE, credits
- Mills/Newberry (2001) – public firms and high-debt firms have higher BT diffs, some evidence for big bath.
- Hanlon/Shevlin (2002) – stock option acctg.
- Manzon/Plesko – estimated BT diff from financial statements = $f(\text{NPPE, intangibles})$
- Boynton et al. (2002) – consolidation issues
- Desai (2002) – model as function of income level.

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Financial Statement and Tax Return Information

- Compustat-SOI Matched Database
 - 6,191 LMSB public companies from 1990 to 1999
 - Matched By EIN and Accounting Period
 - We note Treasury/SOI matching effort.
- Panel of 1,579 Companies
 - To examine trends in book-tax differences
 - Includes companies for which matches exist for each year from 1991 to 1998
 - All results based on panel.

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Measures of Book-Tax Income Differences

- Two Measures of Book Income
 1. Worldwide Pre-Tax Income from Compustat (Net of State and Other Income Tax Expenses)
 2. Pre-Tax Income from Form 1120, Schedule M-1 (Lines 1 + 2)
- Relative to Net (taxable) Income (Form 1120, Line 28) before NOLD and special deductions.

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Book-Tax Income Differences

- **Book Income Exceeds Tax Income (Table 2)**
 - By less than \$10 Billion in 1991
 - Increases to over \$150 Billion in 1998
 - Differences greater for multinational firms
 - Increase occurs in all LMSB industries
 - Particularly Financial Services and Communications
 - Differences greater for profitable firms
 - Top quintile comprises most of aggregate difference; top 15 firms comprise 1/3 difference.

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Worldwide Income Differences (Book-Tax)

\$ Billions, See Table 2

	1991	1992	1993	1994	1995	1996	1997	1998
Total	8.2	22.7	27.5	76.1	94.7	102.3	104.2	158.1
Industry								
Financial Services	3.8	5.6	7.3	10.6	17.3	21.8	29.4	51.6
Natural Resources	4.8	12.5	10.4	17.7	11.1	22.6	18.8	13.4
Comm., Tech. & Media	-1.1	-4.0	-1.4	18.0	21.2	20.2	18.5	28.4
Retail, Food, Pharm. & Health	11.2	9.4	14.4	15.9	16.1	24.0	20.1	32.8
Heavy Manufact. & Transp.	-10.4	-0.9	-3.4	14.0	29.1	13.7	17.4	31.8
Global Character								
Domestic	-5.1	-9.4	-3.1	15.0	13.2	7.8	9.2	14.5
Multinational	13.4	32.0	30.5	61.2	81.6	94.5	95.0	143.6
Profitability								
Net income (line 28) > 0	10.1	20.7	27.4	61.5	74.7	94.1	95.2	132.1
Net income (line 28) <= 0	-1.8	1.9	0.1	14.6	20.1	8.2	9.0	26.0

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M-1 Income Differences (Book-Tax)

\$ Billions, See Table 2

	1991	1992	1993	1994	1995	1996	1997	1998
Total	4.2	-45.0	40.0	70.3	71.6	105.4	100.2	152.5
Industry								
Financial Services	9.9	8.1	10.2	19.3	18.9	27.7	31.1	39.8
Natural Resources	2.2	-7.7	17.3	13.8	11.1	25.9	11.3	27.9
Comm., Tech. & Media	-6.5	-0.9	2.6	13.6	8.3	21.3	22.6	49.2
Retail, Food, Pharm. & Health	11.6	5.8	22.9	17.8	17.0	23.4	24.2	20.2
Heavy Manufact. & Transp.	-13.0	-50.2	-13.0	5.9	16.3	7.1	10.9	15.4
Global Character								
Domestic	-9.0	-8.8	-1.3	9.3	4.8	8.9	12.4	9.3
Multinational	13.2	-36.2	41.3	61.0	66.8	96.4	87.8	143.2
Profitability								
Net income (line 28) > 0	5.6	-1.0	32.7	60.7	56.3	94.8	90.9	136.9
Net income (line 28) <= 0	-1.4	-44.0	7.3	9.6	15.3	10.6	9.4	15.7

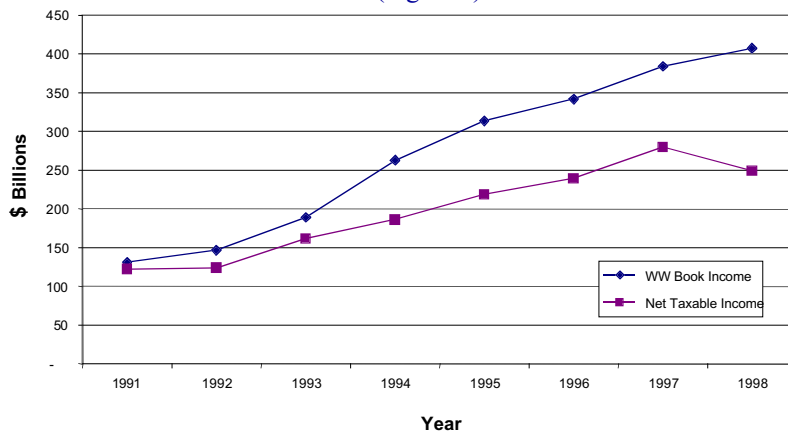
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Worldwide Book & Taxable Income of Panel Firms

(Figure 1)

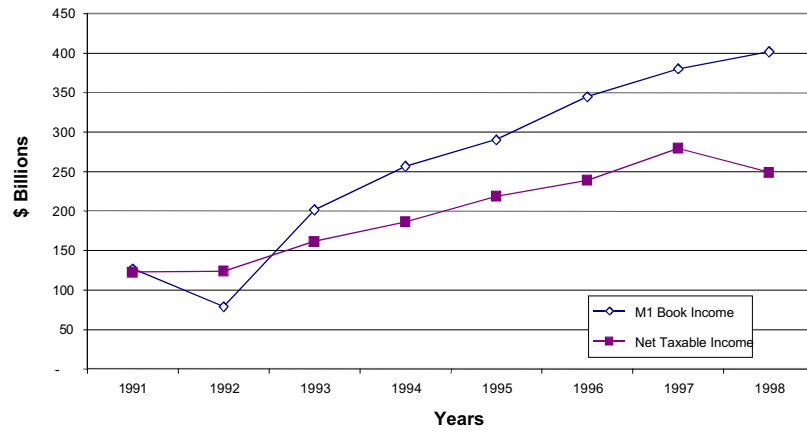


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M-1 Book & Taxable Income of Panel Firms (Figure 2)

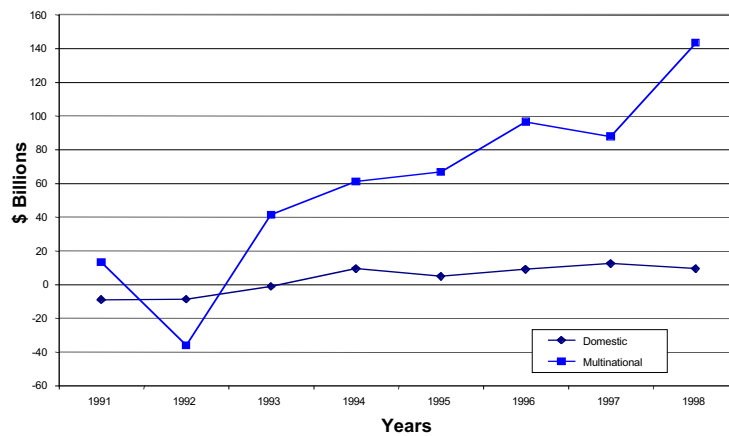


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M-1 Income Differences By Global Character (Figure 3)



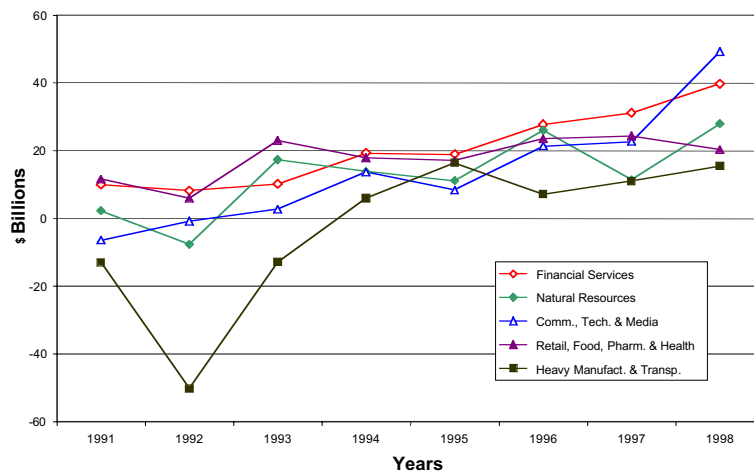
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M-1 Income Differences By Industry

(Figure 4)



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Income Differences By Asset Class

\$ Billions (See Table 4)

	1991	1992	1993	1994	1995	1996	1997	1998
Worldwide Income								
Top 15 Firms	0.4	3.2	-1.8	19.7	32.1	24.5	33.5	62.6
Top Quintile	5.5	18.6	25.0	69.5	86.4	91.5	93.6	148.6
Second Quintile	2.1	3.6	1.4	5.2	6.1	7.6	8.8	8.3
Middle Quintile	0.2	0.9	1.0	1.0	2.2	2.2	2.5	2.0
Fourth Quintile	0.4	-0.2	0.0	0.7	0.3	1.0	-0.4	-0.7
Bottom Quintile	0.0	-0.3	0.0	-0.3	-0.2	0.1	-0.3	-0.1
M-1 Income								
Top 15 Firms	0.1	-33.7	1.7	23.7	29.1	29.2	36.1	51.3
Top Quintile	4.0	-44.3	40.7	67.7	66.1	99.3	93.2	144.2
Second Quintile	0.0	0.0	-3.3	1.3	4.8	3.6	5.5	7.4
Middle Quintile	-0.2	0.1	2.4	0.8	0.7	1.5	1.7	2.0
Fourth Quintile	0.7	-0.5	0.1	0.7	0.1	0.9	-0.1	-0.9
Bottom Quintile	-0.3	-0.3	0.1	-0.2	-0.2	0.0	-0.1	-0.1

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Book-Tax Balance Sheet Differences

- Total Assets and Liabilities from Compustat
- Relative to Total Assets and Liabilities from Form 1120, Schedule L
 - Total Liabilities = sum of SOI components (excludes Shareholders' Equity)
- Book consolidates worldwide subs > 50%
- Tax consolidates domestic subs >= 80%
- Form 5471 assets and liabilities of CFCs not yet considered in computing balance sheet differences.

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Book-Tax Balance Sheet Differences

- Tax Assets unexpectedly exceed Book Assets
 - By \$290 Billion in 1991
 - Increases to Over \$1.9 Trillion in 1998
 - Differences greater for Multinationals
 - Increase Occurs In All LMSB Industries
 - Particularly Financial Services
 - Differences greater for Profitable Firms
 - Top quintile comprise majority of difference and top 15 firms comprise over \$1.2 trillion in 1998.
- Similar results for liability differences

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Asset Differences (Book less Tax)

\$ Billions (See Table 3)

	1991	1992	1993	1994	1995	1996	1997	1998
Total	-290.9	-494.0	-370.4	-432.7	-287.5	-731.5	-1,343.0	-1,947.8
Industry								
Financial Services	14.1	-130.4	-41.7	-119.2	97.4	-328.5	-747.5	-1,066.7
Natural Resources	-173.6	-154.3	-143.8	-136.1	-149.1	-148.8	-201.4	-317.7
Comm., Tech. & Media	-17.4	-21.4	-23.4	-82.3	-87.5	-54.3	-152.3	-207.5
Retail, Food, Pharm. & Health	-142.9	-211.0	-201.8	-171.6	-229.7	-134.6	-125.9	-142.6
Heavy Manufact. & Transp.	28.8	23.0	40.3	76.4	81.4	-65.3	-116.0	-213.3
Global Character								
Domestic	84.1	-0.5	-27.3	-2.6	142.4	-42.1	-45.5	-3.9
Multinational	-375.0	-493.5	-343.0	-430.1	-429.9	-689.4	-1,297.5	-1,943.9
Profitability								
Net income (line 28) > 0	-350.2	-344.0	-355.4	-442.7	-296.4	-698.5	-1,324.5	-1,861.6
Net income (line 28) <= 0	59.3	-150.0	-15.0	10.0	8.9	-33.0	-18.5	-86.2

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Liability Differences (Book less tax)

\$ Billions (see Table 3)

	1991	1992	1993	1994	1995	1996	1997	1998
Total	130.6	-36.5	144.5	62.5	213.4	-81.0	-527.0	-922.6
Industry								
Financial Services	165.2	47.0	170.1	110.5	327.0	38.5	-272.2	-492.9
Natural Resources	-31.0	-33.4	-43.6	-36.9	-44.8	-42.3	-58.4	-120.3
Comm., Tech. & Media	7.3	10.2	30.8	-40.4	-55.5	-14.7	-105.5	-138.8
Retail, Food, Pharm. & Health	-71.3	-127.6	-111.8	-92.8	-133.4	-83.8	-67.0	-76.0
Heavy Manufact. & Transp.	60.4	67.3	99.0	122.2	120.0	21.3	-23.8	-94.7
Global Character								
Domestic	104.2	37.7	27.6	25.6	159.5	18.4	25.3	51.9
Multinational	26.4	-74.2	117.0	36.9	53.9	-99.4	-552.2	-974.5
Profitability								
Net income (line 28) > 0	31.8	-9.8	126.6	54.1	191.3	-72.2	-544.0	-988.7
Net income (line 28) <= 0	98.8	-26.7	17.9	8.4	22.1	-8.8	17.0	66.1

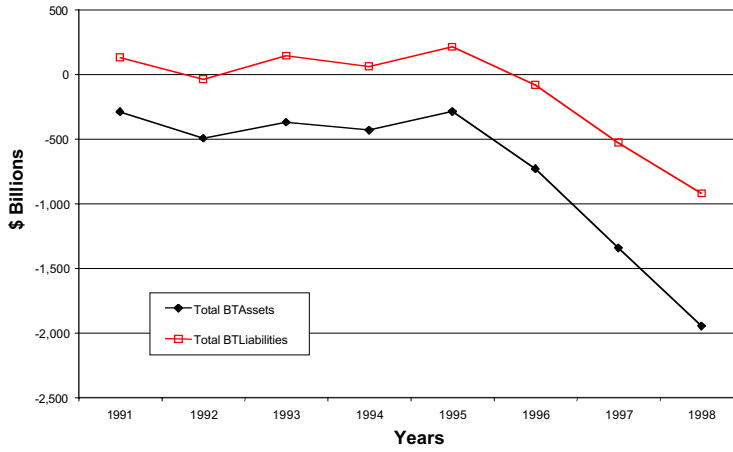
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Book - Tax Asset and Liability Differences for Panel Firms

(See Figure 5)



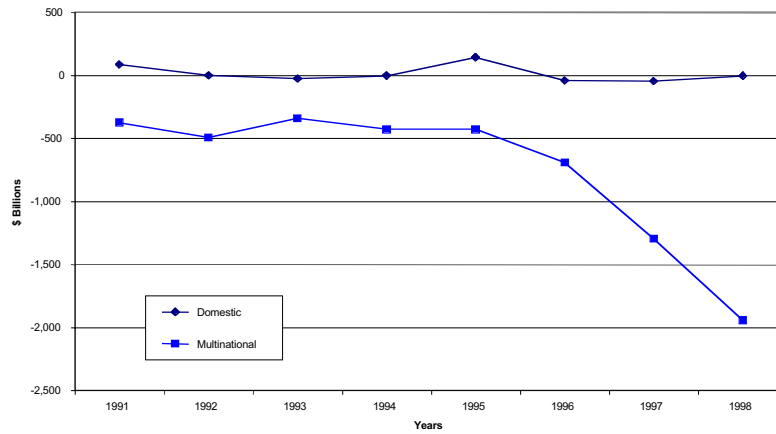
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Book - Tax Asset Differences By Global Character

(see Figure 6)



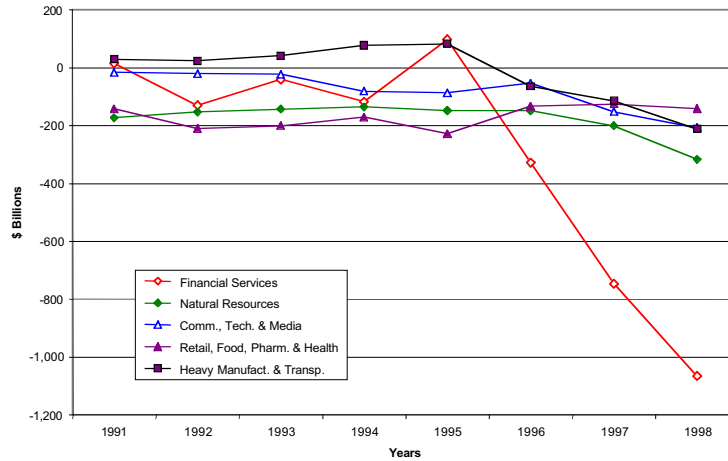
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Book - Tax Asset Differences By Industry

(See Figure 7)



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Balance Sheet Differences By Asset Class

\$ Billions (see Table 4)

	1991	1992	1993	1994	1995	1996	1997	1998
Asset Difference								
Top 15 Firms	121.7	-27.9	60.0	-8.8	184.8	-277.3	-783.4	-1,286.8
Top Quintile	-264.8	-471.1	-340.4	-417.0	-274.3	-720.0	-1,334.3	-1,919.6
Second Quintile	-16.2	-12.2	-19.8	-7.2	-5.3	-5.4	0.5	-19.3
Middle Quintile	-6.6	-8.9	-7.5	-6.5	-6.1	-4.1	-6.2	-6.7
Fourth Quintile	-2.5	-3.5	-3.3	-2.5	-2.0	-2.5	-2.8	-2.2
Bottom Quintile	-0.7	1.7	0.5	0.5	0.3	0.4	-0.3	0.1
Liability Difference								
Top 15 Firms	173.5	63.1	180.9	122.2	297.4	-6.8	-399.7	-785.9
Top Quintile	135.2	-37.6	150.9	58.7	209.7	-90.4	-545.4	-923.4
Second Quintile	0.3	5.7	-3.0	7.3	6.4	10.5	20.1	3.5
Middle Quintile	-2.0	-4.1	-2.2	-2.7	-2.0	-0.8	-0.8	-2.1
Fourth Quintile	-1.9	-2.2	-2.0	-1.6	-1.1	-1.0	-1.0	-0.6
Bottom Quintile	-1.0	1.8	0.7	0.8	0.5	0.6	0.2	0.0

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Potential Sources of Balance Sheet Differences

- Possible double counting of balance sheet items
 - Non-elimination of intercompany transactions
 - Industry-specific accounting issues
- Structured transactions
 - Move assets/liabilities off balance sheet for books via SPEs.
 - Report assets/liabilities on tax balance sheet consistent with continuing to claim tax deductions for interest, depreciation, etc.
- We cannot yet quantify explanations for aggregate differences.
 - Anecdotal discussions with audit teams and IRS financial products experts reveal examples of both explanations.

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Future Work on this project

- LMSB Research project team:
 - Identify and understand components of book-tax income and balance sheet differences
 - Correlate measures with audit results to refine indicators of compliance risk
- Striking trends in late 1990's motivate authors to continue research on book-tax balance sheet differences.
- Possible inter-agency cooperation

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