
Session One:

Compliance of Large Business Entities



2010 IRS Research Conference

Temporary and Permanent Book-Tax Differences: Complements or Substitutes?

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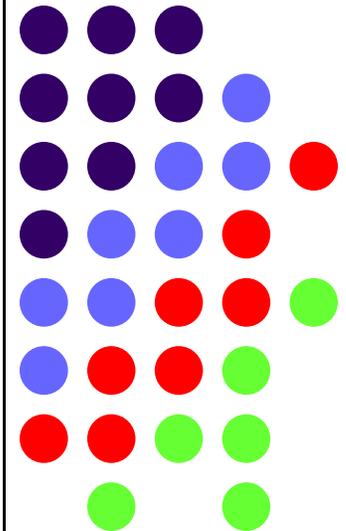
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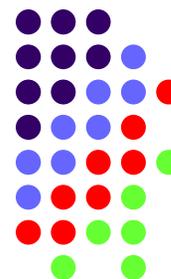
IRS Research Conference

Washington, D.C.

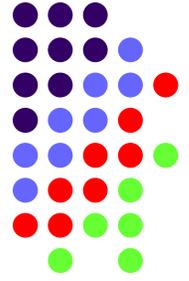
June 2010



Overview



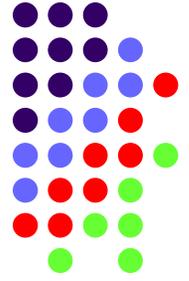
- We investigate whether firms treat temporary (or timing) book-tax differences and permanent book-tax differences as complements or substitutes in their tax planning
- We investigate whether firms facing capital market pressure have a different predilection towards permanent book-tax differences as compared to private companies



Book-Tax Differences

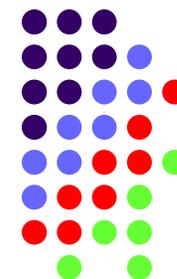
- Temporary Differences
 - Depreciation, bad debt expense
 - Affects taxable income and book income in the same amount but at different points in time
 - Does not affect the effective tax rate
- Permanent Differences
 - Municipal bond interest, meals and entertainment disallowance
 - Never affects either taxable income or book income
 - Affects the effective tax rate

Permanent v. Temporary



- This designation stems from FAS 109, which governs the financial reporting of firms' tax accruals
- Firms without public debt or equity, have little incentive to care about the character of their book-tax difference
- Permanent and temporary book-tax differences both reduce cash outflows for taxes

Effective Tax Rate



Temporary Difference

\$100 of bonus depreciation for tax purposes (will reduce financial stmt income over 10 yrs)

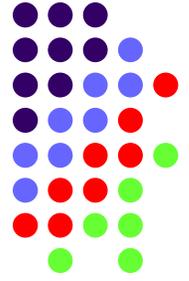
| | |
|---------------------|----------------|
| Pre-Tax GAAP Income | \$1000 |
| Taxable Income | \$900 |
| GAAP Tax Expense | \$350 |
| Current | \$315 |
| Deferred | 35 |
| Net income | \$650 |
| Effective Tax Rate | 35% |
| | (\$350/\$1000) |

Permanent Difference

\$100 municipal bond interest

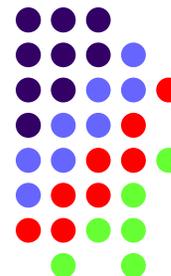
| | |
|---------------------|----------------|
| Pre-Tax GAAP Income | \$1000 |
| Taxable Income | \$900 |
| GAAP Tax Expense | \$315 |
| Current | \$315 |
| Deferred | 0 |
| Net income | \$685 |
| Effective Tax Rate | 31.5% |
| | (\$315/\$1000) |

Complements v. Substitutes



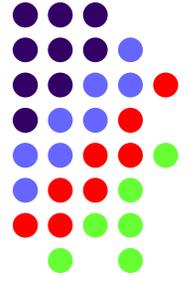
- If firms aggressively pursue all income-decreasing book-tax differences, then we expect a positive association between temporary and permanent book-tax differences
- However, if firms undertake a finite amount of tax planning to manage their tax obligation to some “optional” amount, then we expect that firms choose between pursuing permanent versus temporary book-tax differences

Ownership Structure



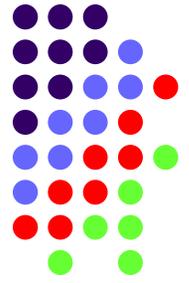
- Public Firms
 - Equity is publicly traded
 - Face earnings pressure potentially from debt and equity market
- Private Firms
 - Equity is privately owned, Debt is private
 - Relatively low capital market pressure
- Quasi-Public Firms
 - Equity if privately owned, Debt is publicly owned
 - Greater capital market pressure than Private firms but less than Public firms

Conforming v. Non-Conforming



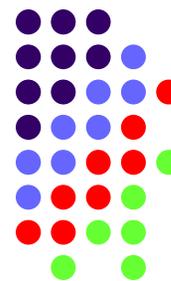
- If a firm undertakes a tax planning opportunity, then firm faces a choice as to how to treat the item for GAAP reporting
 - Conforming
 - Reduce GAAP income
 - No book-tax difference created
 - Less likely for public companies
 - Non-Conforming
 - Do not reduce GAAP income
 - Book-tax difference created

Financial Statement Risk

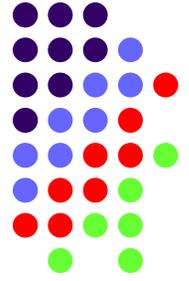


- If public companies are aggressive tax planners, then they must record a loss contingency for the amount they anticipate owing upon audit by the tax authorities
 - Creates financial statement risk because firms may lose the financial statement benefit of permanent differences and induce volatility into earnings
 - Creates financial statement risk because firms must disclose the extent of its tax planning to the capital markets (FIN 48)

Prior Literature



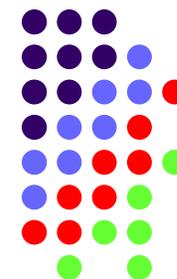
- Mills (1998)
 - Finds that with larger book-tax differences have greater audit adjustments
 - Not much evidence that the informativeness of book-tax differences varies by public v. private equity ownership
- Cloyd, Pratt and Stock (1996)
 - Firms were more likely to undergo conforming tax planning when conformity increased the likelihood of prevailing upon audit
 - Public firms were less likely to conform than private firms
- Badertscher, Katz and Rego (2010)
 - Find that private-equity backed quasi-public firms are relatively more aggressive tax planners undertaking conforming and non-conforming tax planning



Research Questions

- Do public firms have relatively more book-tax differences than private firms?
- Do firms treat permanent and timing differences as substitutes or complements?
- Does the substitution/complementarity between permanent and temporary differences vary by ownership structure?

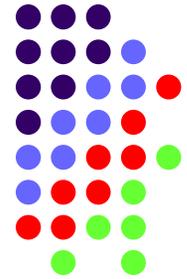
Sample



| | Firms | Firm-years |
|--|----------------|-------------------|
| In IRS data | 135,406 | 304,806 |
| Less: non C-Corporations | 65,772 | 146,851 |
| Less: total assets less than \$10 million | 34,463 | 77,446 |
| Less: no M-3 Attached | 977 | 2,805 |
| Less: large foreign operations | 2,140 | 7,271 |
| Less: negative book income | 7,681 | 20,300 |
| Total in Sample | 24,373 | 50,133 |

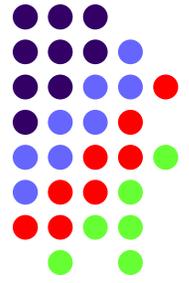
| | Public | Quasi-Public | Private |
|-------------------|---------------|---------------------|----------------|
| Firms | 2,799 | 23 | 21,445 |
| Firm Years | 6,255 | 40 | 43,838 |

Sample Descriptive Statistics



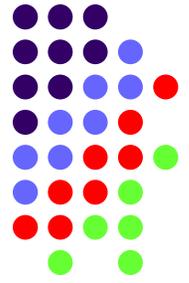
| Variable | PUBLIC | | | QUASI-PUBLIC | | | PRIVATE | | |
|----------------------------------|-----------|----------|--------|--------------|----------|----------|------------|--------|--------|
| | Sum | Mean | Median | Sum | Mean | Median | Sum | Mean | Median |
| Total Assets (in \$ Millions) | 8,887,838 | 1,422.52 | 526.78 | 89,412 | 2,235.29 | 1,055.94 | 12,248,235 | 279.40 | 66.88 |
| ROA | | 0.063 | 0.038 | | 0.034 | 0.023 | | 0.054 | 0.026 |
| TI ROA | | 0.059 | 0.018 | | 0.035 | 0.012 | | 0.062 | 0.018 |
| NI ROA | | 0.070 | 0.038 | | 0.048 | 0.023 | | 0.072 | 0.030 |
| PPE | | 0.183 | 0.070 | | 0.327 | 0.233 | | 0.166 | 0.050 |
| LEV | | 0.241 | 0.159 | | 0.498 | 0.488 | | 0.264 | 0.148 |
| INTAN | | 0.102 | 0.016 | | 0.100 | 0.018 | | 0.043 | 0.000 |
| GROW | | 0.210 | 0.105 | | 0.229 | 0.075 | | 0.167 | 0.075 |
| # Small Inc. Firms | 2,310 | 0.369 | | 18 | 0.450 | | 16,769 | 0.383 | |
| Num. Yrs. Incorporated | | 22.569 | 17.000 | | 23.925 | 14.500 | 26.612 | 20.000 | |

Univariate Book-Tax Difference Statistics



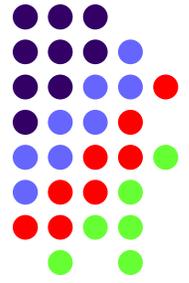
| Variable (Means) | Public | Private | Quasi-Public |
|--------------------------------|-----------|-----------|--------------|
| Total book-tax Differences | | | |
| BTD | 8,762.823 | 1,054.234 | 4,361.277 |
| SCBTD | 0.014 | 0.004 | -0.010 |
| Quintile 1 SCBTD | -0.006 | -0.009 | -0.026 |
| Quintile 5 SCBTD | 0.185 | 0.185 | 0.117 |
| % Reportable Transactions | 0.024 | 0.004 | 0.050 |
| Temporary book-tax Differences | | | |
| TEMP_BTD | 2,678.956 | 469.558 | 965.002 |
| TEMP_SCBTD | 0.005 | 0.002 | -0.007 |
| Quintile 1 TEMP_SCBTD | -0.012 | -0.009 | -0.019 |
| Quintile 5 TEMP_SCBTD | 0.156 | 0.156 | 0.117 |
| % Reportable Transactions | 0.018 | 0.003 | 0.050 |
| Permanent book-tax Differences | | | |
| PERM_BTD | 5,362.793 | 473.885 | 1,763.064 |
| PERM_SCBTD | 0.006 | 0.001 | -0.003 |
| Quintile 1 PERM_SCBTD | -0.001 | -0.002 | -0.004 |
| Quintile 5 PERM_SCBTD | 0.068 | 0.064 | 0.028 |
| % Reportable Transactions | 0.011 | 0.001 | 0.000 |

More book-tax differences for public firms?



| Dependent Variable | SCBTD | PERM_SCBTD | TEMP_SCBTD |
|------------------------------------|----------------------|----------------------|----------------------|
| PUBLIC | 0.008*** (0.001) | 0.002*** (0.001) | 0.005*** (0.000) |
| ROA | 0.126*** (0.007) | 0.064*** (0.006) | 0.030*** (0.002) |
| PPE | 0.002 (0.001) | 0.004*** (0.001) | -0.001*** (0.000) |
| LEV | 0.009*** (0.001) | 0.010*** (0.001) | -0.002*** (0.000) |
| INTAN | 0.011*** (0.002) | 0.012*** (0.002) | -0.001 (0.001) |
| GROW | -0.001*** (0.000) | -0.001*** (0.000) | 0.000 (0.000) |
| Industry Fixed Effects Included | YES | YES | YES |
| Year Fixed Effects Included | YES | YES | YES |
| R-squared | 0.081 | 0.047 | 0.060 |
| N | 41,900 | 41,900 | 41,900 |

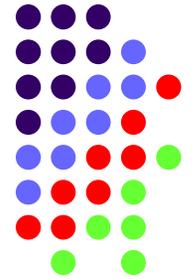
Multivariate Substitution v. Complements



Panel A: Basic Complement or Substitution

| Dependent Variable | PERM SCBTD | TEMP SCBTD | Δ PERM SCBTD | Δ TEMP SCBTD |
|---------------------|----------------------|----------------------|----------------------|----------------------|
| TEMP_SCBTD | -0.063*** (0.004) | | | |
| PERM_SCBTD | | -0.326*** (0.021) | | |
| Δ TEMP_SCBTD | | | -0.071*** (0.006) | |
| Δ PERM_SCBTD | | | | -0.423*** (0.031) |

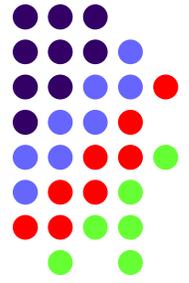
Multivariate Substitution v. Complements



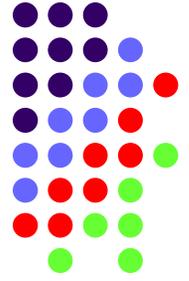
Panel B: Complements or Substitution by Ownership

| Dependent Variable | PERM_SCBTD | TEMP_SCBTD | Δ PERM_SCBTD | Δ TEMP_SCBTD |
|-----------------------------|----------------------|----------------------|---------------------|----------------------|
| TEMP_SCBTD | -0.061*** (0.005) | | | |
| PUBLIC*TEMP_SCBTD | -0.018 (0.012) | | | |
| PERM_SCBTD | | -0.340*** (0.025) | | |
| PUBLIC*PERM_SCBTD | | 0.058 (0.043) | | |
| Δ TEMP_SCBTD | | | -0.069*** -0.006 | |
| PUBLIC* Δ TEMP_SCBTD | | | -0.009 -0.015 | |
| Δ PERM_SCBTD | | | | -0.467*** (0.037) |
| PUBLIC* Δ PERM_SCBTD | | | | 0.176*** (0.063) |

Conclusions (Preliminary)



- Public firms have more temporary and permanent book-tax differences, suggesting that they undergo less conforming tax planning
- Firms treat temporary and permanent differences as substitutes
- Weak evidence that capital market's pressure alters the substitution between temporary and permanent differences



Future Work

- Consider the direction of the temporary and permanent book-tax differences
- Consider variation in the substitution across relative aggressiveness of the book-tax differences
- Did FIN48 alter the proportion of permanent and temporary book-tax differences undertaken by public firms?

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Discussant: Drew Lyon

PricewaterhouseCoopers



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