Are Earnings with Large Book-Tax Differences Reliable? A Replication and Extension of Hanlon (2005)

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Introduction

- Companies use different rules of reporting income. Financial Statements use GAAP. Tax Returns use the IRC.
- Differences are known as Book-Tax Differences. Typically, these are only timing differences and will resolve over time.
- However, companies are incentivized to report high book income and low taxable income, so if the book-tax differences are large, it may be a sign of earnings management and/or tax avoidance.

Hypotheses

- **H1:** Pre-tax earnings persistence for firm-years with large negative or large positive book-tax differences is lower than pre-tax earnings persistence for firm-years with small book-tax differences.
- **H2:** The persistence of the accruals component of earnings for future earnings is lower for firm-years with large negative or large positive book-tax differences relative to firm-years with small book-tax differences.

Data

- All data was collected from Compustat via the SAS Studio server provided by Wharton.
- Deferred Tax Expense = Book-Tax-Differences.
- PTBI = Pre-Tax Book Income
- PTCF = Pre-Tax Cash Flows
- PTACC = Pre-Tax Accruals
- LBTD = Large Book-Tax Differences (Top or Bottom Quintile)
- LPBTD = Large Positive Book-Tax Differences (Book ¿ Tax) (Top Quintile)
- LNBTD = Large Negative Book-Tax Differences (Book ¡ Tax) (Bottom Quintile)

Methods - PTBI

$$PTBI_{t+1} = \beta_0 + \beta_1 PTBI_t + \varepsilon_{t+1}$$

$$PTBI_{t+1} = \beta_0 + \beta_1 LBTD_t + \beta_2 PTBI_t + \beta_3 PTBI_t * LBTD_t + \varepsilon_{t+1}$$

$$PTBI_{t+1} = \beta_0 + \beta_1 LNBTD_t + \beta_2 LPBTD_t + \beta_3 PTBI_t + \beta_4 PTBI_t * LNBTD_t + \beta_5 PTBI_t * LPBTD_t + \varepsilon_{t+1}$$

Methods - PTBI Components

$$(4) PTBI_{t+1} = \beta_0 + \beta_1 PTCF_t + \beta_2 PTACC_t + \varepsilon_{t+1}$$

$$(5) PTBI_{t+1} = \beta_0 + \beta_1 LBTD_t + \beta_2 PTCF_t + \beta_3 PTACC_t + \beta_4 PTCF_t * LBTD_t + \beta_5 PTACC_t * LBTD_t + \varepsilon_{t+1}$$

$$(6) PTBI_{t+1} = \beta_0 + \beta_1 LNBTD_t + \beta_2 LPBTD_t + \beta_3 PTCF_t + \beta_4 PTACC_t + \beta_5 PTCF_t * LNBTD_t + \beta_6 PTCF_t * LPBTD_t + \beta_7 PTACC_t * LNBTD_t + \beta_8 PTACC_t * LPBTD_t + \varepsilon_{t+1}$$

Findings

Table: PTBI Persistence Results

Variable	(1)	(2)	(3)
Intercept	0.025***	0.019***	0.019***
scaled_pi	0.620***	0.681***	0.681***
lbtd		0.0141***	
pi_lbtd		-0.123***	
lnbtd			0.020***
lpbtd			0.009***
pi_lnbtd			-0.121***
pi_lpbtd			-0.130***
Adj R^2	0.495	0.500	0.502
N	24,931	24,931	24,931

Findings

Table: Pre-Tax Earnings Components Results

Variable	(4)	(5)	(6)
Intercept	0.020***	0.015***	0.015***
scaled_ptcf	0.634***	0.692***	0.692***
scaled_ptacc	0.480***	0.556***	0.556***
lbtd		0.010***	
ptcf_lbtd		-0.114***	
ptacc_lbtd		-0.150***	
lnbtd			0.016***
lpbtd			0.005*
ptcf_lnbtd			-0.117***
ptcf_lpbtd			-0.113***
ptacc_lnbtd			-0.150***
ptacc_lpbtd			-0.145***
Adj R^2	0.503	0.508	0.510
N	24,931	24,931	24,931

How did AI Help?

- ChatGPT made this slide template and showed me how to actually make a Beamer.
- ChatGPT also took my research paper from my Microsoft Word Document and wrote the whole thing in LaTeX script for me.

Conclusion

- Large Book-Tax Differences are associated with less persistent, and therefore lower quality, reported earnings.
- Cash Flows are a better predictor of future performance than accruals, but both components are less predictive in firms with large book-tax differences.
- Whatever choices led you to not becoming an accounting researcher - you can still feel good about those choices.