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"Can Taxes Predict Low Quality Earnings?"

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What?

1. **Observation:** Firms report higher profits to investors than to IRS
2. **Question:** Are profits unsustainable? Do investors notice?

- ⚠ Opportunism is not isolated
- ⚠ Investors do not fully process
- ⚠ Predictive is relevance

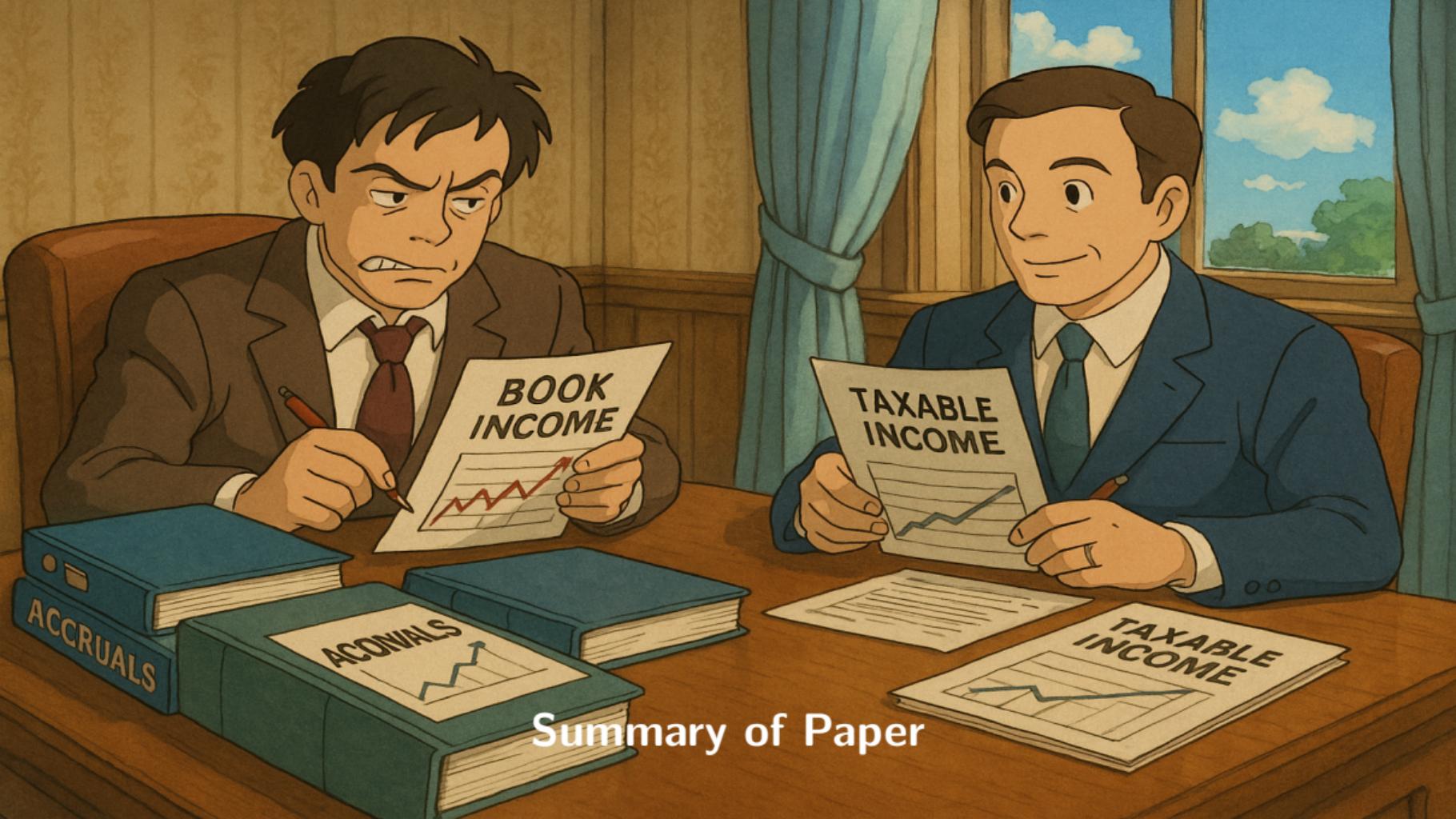
How?

Two Firms, Same Book Income. One Big Difference.

Component	Firm A	Firm B
Book Income (Pre-Tax)	\$100M	\$100M
Taxable Income	\$90M	\$40M
Book-Tax Difference	\$10M	\$60M
Accruals	\$10M	\$50M

Why is Firm B reporting so much less to the IRS?

Observation: Large book-tax differences often reflect **less persistent accruals** later on.



Summary of Paper

Hypothesis 1: Book-Tax Differences and Earnings Persistence

Goal: Test whether large book-tax differences (BTDs) are associated with lower persistence in earnings.

Regression Specification:

$$\text{PTBI}_{t+1} = \gamma_0 + \gamma_1 \text{LNBTD}_t + \gamma_2 \text{LPBTD}_t + \gamma_3 \text{PTBI}_t + \gamma_4 (\text{PTBI}_t \times \text{LNBTD}_t) + \gamma_5 (\text{PTBI}_t \times \text{LPBTD}_t)$$

Interpretation:

- PTBI: Pre-tax book income scaled by average assets
- LNBTD, LPBTD: Indicators for large negative/positive BTDs
- γ_4, γ_5 : Capture changes in persistence due to BTD level

Prediction: $\gamma_4 < 0, \gamma_5 < 0$

Hypothesis 2: Earnings Components and BTDs

Goal: Decompose earnings into accruals and cash flows to test how BTDs affect their persistence.

Regression Specification:

$$\begin{aligned} \text{PTBI}_{t+1} = & \gamma_0 + \gamma_1 \text{PTCF}_t + \gamma_2 \text{PTACC}_t + \gamma_3 (\text{PTCF}_t \times \text{LNBTD}_t) + \gamma_4 (\text{PTCF}_t \times \text{LPBTD}_t) \\ & + \gamma_5 (\text{PTACC}_t \times \text{LNBTD}_t) + \gamma_6 (\text{PTACC}_t \times \text{LPBTD}_t) + \varepsilon_{t+1} \end{aligned}$$

Variables:

- PTCF: Pre-tax cash flows PTACC: Pre-tax accruals
- Interactions capture BTD-driven differences in persistence

Prediction: $\gamma_5 < 0, \gamma_6 < 0$

Hypothesis 3: Market Pricing via Mishkin Test

Goal: Test whether investors correctly price the persistence of earnings components, conditional on BTD levels.

System of Equations (Mishkin 1983):

$$\text{PTBI}_{t+1} = \gamma_0 + \gamma_1 \text{PTCF}_t + \gamma_2 \text{PTACC}_t + \varepsilon_t$$

$$\text{SAR}_{t+1} = \alpha + \beta_1 (\text{PTBI}_{t+1} - \hat{\gamma}_0 - \hat{\gamma}_1 \text{PTCF}_t - \hat{\gamma}_2 \text{PTACC}_t) + \varepsilon_t$$

Interpretation:

- SAR: Size-adjusted abnormal return
- Test whether $\beta_1 = 1$ (i.e., investors price earnings persistence accurately)

Prediction: $\beta_1 \approx 1$ for large BTD firms \Rightarrow no mispricing

Hypothesis 3: Return Regressions for Economic Significance

Goal: Assess economic significance of accrual mispricing across BTD subsamples.

Fama-MacBeth Regression:

$$\text{SAR}_{t+1} = \beta_0 + \beta_1 \text{PTACC}_t + \beta_2 \ln(\text{MVE}) + \beta_3 \ln(\text{BM}) + \beta_4 \text{Beta} + \beta_5 \text{EP} + \beta_6 \text{SAR}_t^{\text{past}} + \varepsilon_t$$

Notes:

- Cross-sectional regression estimated annually; coefficients averaged over years
- β_1 : Return to accrual-based hedge portfolio

Prediction: $\beta_1 < 0$ for small BTD firms; $\beta_1 \approx 0$ for large BTD firms (i.e., accruals correctly priced)

Summary of Empirical Tests and Policy Implications

- **Deferred Tax Disclosures:** Only 45% of firm-years reconcile deferred tax expense with footnote changes; large positive BTDs stem from depreciation, while large negative BTDs reflect reserves and accruals linked to earnings management.
- **Special Items Sensitivity:** Excluding firm-years with material special items weakens the LPBTD–accrual persistence result, indicating that transitory items partly drive the BTD–persistence link.
- **Alternative Scalers and ROE:** Using lagged assets and adding an ROE interaction produces consistent but noisier results, with high-ROE firms exhibiting greater mean reversion.
- **Discretionary Accruals Proxy:** Accruals excluding BTDs are more persistent than the BTD component itself, supporting the interpretation of BTDs as capturing earnings management discretion.
- **Policy Implication:** Expanded tax footnote disclosure, especially detailed deferred tax reconciliation—would better inform investors about earnings quality.

Questions for Hanlon (2005)

Strengths

- ✓ Extends literature by analyzing both **positive and negative** book-tax differences (BTDs), whereas prior work focused on positive BTDs
- ✓ Uses BTDs as a proxy for **earnings management** and links them to **investor expectations**.

Critiques and Limitations

- **Limited comparison to ERC literature:** The paper could integrate findings with prior work on earnings response coefficients (e.g., Joos et al., Sloan)

Thank you!

Hanlon (2005) – Summary of Findings

- **Focus:** Do large book-tax differences (BTDs) indicate lower persistence of earnings and its components, and are they correctly priced by investors?
- **Main Results:**
 - Firm-years with **large positive BTDs** (book \neq taxable income):
 - Lower persistence of pre-tax earnings, accruals, and cash flows.
 - Investors correctly discount accruals, but **under-discount cash flows** → underestimate total earnings persistence.
 - Firm-years with **large negative BTDs** (book \neq taxable income):
 - Also show lower persistence of accruals and cash flows.
 - Investors **overestimate accruals** persistence → pricing inefficiency.
- **Additional Analyses:**
 - Results robust after removing special items.
 - Book-tax differences (proxy for discretionary accruals) are **less persistent** than nondiscretionary accruals.
- **Conclusion:** Book-tax differences contain information about earnings quality and persistence, but investor pricing is only partially aligned with this information.

Comparison of Tax Research Papers

Paper	Question	Finding	Contribution
Hanlon (2005)	Do book-tax gaps indicate low earnings quality?	Large gaps → less persistent earnings; partly priced by investors	Book-tax gap as signal of earnings quality and pricing inefficiency
DeSimone et al. (2014)	Does internal info quality affect income shifting?	Better info → more tax-motivated shifting	Internal reporting quality matters for tax planning
Dyreng et al. (2016)	Does media scrutiny affect tax behavior?	ETR rises after shaming; short-lived	Public pressure can (temporarily) curb avoidance
Guenther et al. (1997)	Do firms trade tax benefits for better reporting?	Non-LIFO firms pay more tax to boost income	Shows cost of book-tax conformity
Hoopes et al. (2018)	Effects of public tax disclosure?	Firms pay more tax; avoider stocks drop	Disclosure deters avoidance; affects valuation
Lisowsky et al. (2013)	Do UTBs flag aggressive tax shelters?	UTBs rise with IRS-flagged shelters	Validates UTBs as red flags for avoidance