Do Accounting Changes Affect the Economic Behavior of Financial Firms?

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Research Question

- Do accounting changes affect firms' economic behavior?
  - Do they induce changes in banks' economic behavior in the absence of a regulatory capital effect?
  - What is the relative influence of capital regulation versus market discipline on banks' decisions?

Accounting and Capital Regulation

- The use of reported accounting numbers in determining capital ratios provides a direct link between accounting standards and capital adequacy.
- This creates an incentive for banks to alter their economic behavior when there are changes in accounting standards.

Basel II

- The first Basel Capital Accord, adopted in 1988, imposed common definitions and minimum standards for regulatory capital across countries.
- The reliance exclusively on regulatory capital ratios with explicit risk weightings allowed banks to take take on more risk than indicated by the regulatory risk weightings.
- Basel II is designed both to reduce the opportunity to circumvent the risk based capital system and to supplement regulatory capital supervision with market discipline.

Market Discipline

- Interest rates on uninsured liabilities should reflect the markets' assessment of bank risk if regulators do not bail out uninsured claims.
- Relative to bank regulators, holders of uninsured liabilities may have a greater incentive and ability to monitor risk.
- Higher rates on uninsured liabilities will reduce banks incentives to incur excessive risk.
- Rates on uninsured liabilities can be used by regulators when assessing bank risk.

Changes in Regulatory Capital Accounting and Banks' Economic Behavior

- Beatty (1995) finds that bank holding companies decreased both the proportion and maturity of investment securities held in the quarter when they adopted SFAS 115. Hodder, Kohlbeck and McAnally (2002) reach similar conclusions.
- Bens and Monahan (2005) find a decline in the volume of U.S. banks' sponsorship in asset-backed commercial paper in response to the FIN 46 requirement of consolidation of VIEs.

Research Setting

- Trust Preferred Securities were invented to provide an instrument that could be treated as debt for tax purposes but as equity for financial reporting purposes
- The equity accounting treatment potentially provided both regulatory capital and market discipline advantages.
- Two recent accounting changes eliminated the equity treatment for financial reporting but not for regulatory capital purposes.

Evidence on Issuance of TPS Prior to Accounting Changes

- Engel, Erickson, and Maydew (1999) examine a sample of 158 TPS issuances made between 1993 and 1996 by industrial and financial firms.
  - Conclude based on 44 issuances used to retire debt that firms incur "substantial costs" to "manage the balance sheet classification of a security."
  - Document that firms issuing securities to retire preferred stock achieve "substantial tax savings."
- More than three quarters of sample firms are subject to regulation that provides an economic benefit of classifying securities as equity

Changes in Accounting for TPS

- In May of 2003 the FASB adopted SFAS 150 requiring that mandatorially redeemable securities by classified as debt.
- In December of 2003 the FASB issued FIN46R requiring the deconsolidation of trusts that issued trust preferred securities.
- As of March 31 2004 reporting date, TPS are included in Other Liabilities rather than in minority interest for regulatory reporting purposes.

TPS Regulatory Capital Treatment

- In Oct. of 1996 Fed ruled that TPS could be included in tier 1 capital, subject to 25% restricted core capital limit.
- On July 2nd of 2003 Federal Reserve Supervisory letter provided guidance stating that TPS should still be included in Tier 1 capital.
- In May of 2004 the Fed issued a proposed rule continuing inclusion of TPS in tier 1 capital subject to 25% limit on core capital net of goodwill (15% if assets > $250 billion) with a three year transition period.
- The final ruling confirming that position was issued in March of 2005, with a five year transition period.

Research Design

- Examine how banks' decisions to issue TPS was affected by regulatory capital, financial reporting and tax considerations before and after the accounting change.

Hypothesis 1

- Publicly traded companies will be more likely than those that are privately held to issue TPS during the period when trust preferred stock could be classified as equity on the balance sheet, but not in the period after the accounting change.
  - Measured using a dichotomous variable equal to one if the company files with the SEC (RSSD9056=1) and equal to zero otherwise

Hypothesis 2

- Companies with more uninsured liabilities will be more likely to issue TPS during the period when TPS could be classified as equity on the balance sheet, but not in the period after the accounting change.
  - Measured using the sum of interest on borrowed funds, subordinated notes and debentures and deposits of $100,000 or more divided by total interest expense (BHCK4396 + BHCK4397 + BHCKA517)/BHCK4073.

Hypothesis 3

- Companies with lower regulatory capital will be more likely to issue trust preferred securities during both accounting periods.
  - Measured using the leverage ratio (BHCK8274) / (BHCKA224), and dichotomous variable equal to one if Capital is less than the sample median value (8.6%) and equal to zero otherwise

Hypothesis 4

- Companies with higher marginal tax rates will be more likely to issue TPS during both accounting periods. The sensitivity of the decision should increase after the dividend tax cut.
  - Measured using the ratio of tax expense to pretax income (BHCK4302 / (BHCK4302 + BHCK4340)

Sample

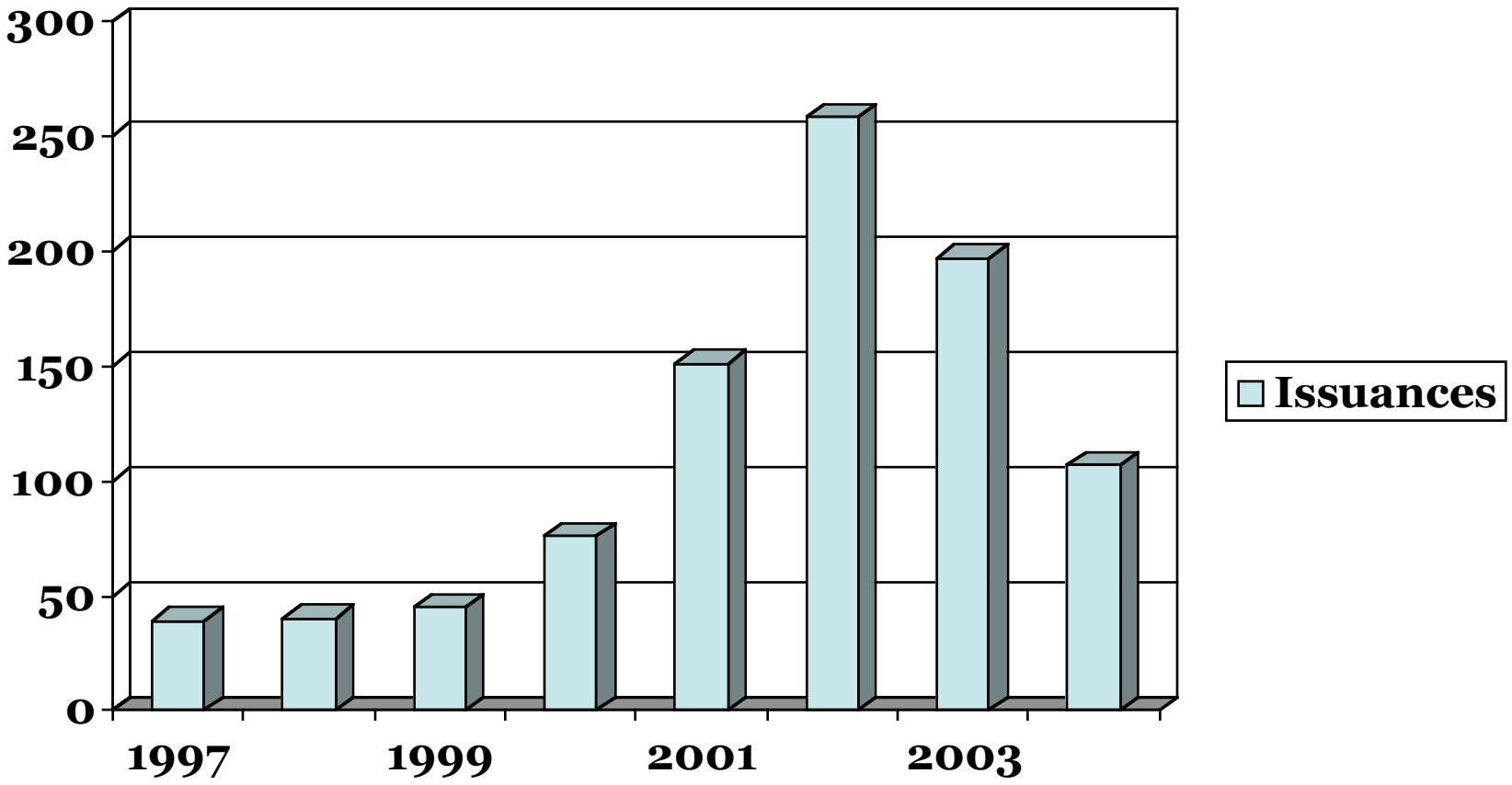
- A sample of bank holding companies was identified from the consolidated financial statement for the bank holding companies report (FR Y-9C) filed with the Federal Reserve System during 1997 – 2004. Companies that report data for item BHCKA507 on Schedule HC-IC – Additional Detail on Capital Components from 1997 - 2004 are retained in the sample.

Research Design

$$\text{Issue} = \alpha + \beta_1 \text{Post} + \beta_2 \text{ Public} + \beta_3 \text{Public*Post} + \beta_4 \text{Debt} + \beta_5 \text{ Debt*Post} + \beta_6 \text{ TD>100} + \beta_7 \text{ TD>100*Post} + \beta_8 \text{ Capital} + \beta_9 \text{ Capital*Post} + \beta_{10} \text{ Goodwill} + \beta_{11} \text{ Goodwill*Post} + \beta_{10} \text{ Lcap} + \beta_{11} \text{ LCap*Post} + \beta_{12} \text{ Tax} + \beta_{13} \text{ Tax*Post} + \beta_{14} \text{ CDrate} + \beta_{15} \text{ Loans} + \beta_{16} \text{ Size} + \beta_{17} \text{ NoPool} + \varepsilon$$

Where Issue is a dichotomous variable equal to 1 if TPS (BHCKA507) is greater than zero in the current year and not in the previous year, and equal to zero if TPS equals zero.

of New TPS Issuances By Year



Univariate Results - Financial Reporting

Variable	Period	Mean - Issue	Mean - NoTPS	Issue-NoTPS	t-stat
Public	Pre	0.423	0.338	0.085	4.20
	Post	0.234	0.227	0.007	0.16
Debt	Pre	0.320	0.254	0.065	14.92
	Post	0.360	0.338	0.022	1.60
TD>100	Pre	0.201	0.180	0.021	4.72
	Post	0.223	0.212	0.011	1.04

Univariate Results - Regulatory Capital

Variable	Period	Mean - Issue	Mean - NoTPS	Issue-NoTPS	t-stat
Capital	Pre	0.079	0.094	-0.016	-9.01
	Post	0.082	0.097	-0.016	-7.76
Lowcap	Pre	0.730	0.450	0.280	13.09
	Post	0.645	0.399	0.246	7.67
Goodwill	Pre	0.005	0.004	0.001	5.10
	Post	0.005	0.004	0.001	1.34

Probit Results - Pre and Post TPS Issuance vs. NoTPS

Variable	Sign	Coefficient	Marginal Effect	t-statistic
Public	+	0.160	0.021	3.62
Public*Post	–	-0.283	-0.036	- 2.16
Debt	+	1.205	0.154	5.62
Debt*Post	–	-1.120	-0.154	-2.45
TD>100	+/–	-0.205	-0.026	-0.79
TD>100*Post	+/–	0.421	0.063	0.82
Capital	–	-9.800	-1.256	-6.76
Lowcap	+	0.205	0.026	3.21
Goodwill	+	3.956	0.510	1.34
Tax	+	0.215	0.027	1.69
Tax*Post	+/-	0.679	0.086	2.03

Sensitivity Analyses

The results are similar if:

- a tobit of the TPS issuance amount is used
- one random observation per bank is selected
- the post variable equals one for both 2003 and 2004.
- uninsured liabilities are measured using BS rather than IS data.
- either capital variable is included separately.
- banks with assets > $250 billion are eliminated
- the coefficients on the control variables are allowed to differ in the post period.
- the difference between the 3 month and the 20 year treasury rate is substituted for CDRate

Conclusions

- Results suggest that banks change their economic behavior in response to accounting changes even in the absence of a regulatory capital effect.
- Change in bank behavior associated with TPS accounting changes suggests that banks believed that the market's perception of risk would be influenced by the classification of these securities on their balance sheets.
- Reliance on market discipline requires that the market appropriately assess risk.