Do Accounting Changes Affect the Economic Behavior of Financial Firms?

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November, 2005

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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.

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.

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Market Discipline

- Basel II adds market discipline to reduce incentives to circumvent capital requirements.
- Interest rates on uninsured liabilities should reflect the markets’ assessment of bank risk if regulators do not bail out uninsured claims.
- 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.

Research Question

- Do accounting changes 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?

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.

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

- Companies will be more likely to issue trust preferred stock during the period when the trust preferred stock can be classified as equity compared to the period when it must be classified as debt on the balance sheet.
  - Measured using a dichotomous variable equal to 1 if the observation is from 2004 and equal to zero otherwise

Hypothesis 2

- 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

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Hypothesis 3

- Companies that access the external debt market 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 commercial paper, subordinated notes and debt, and other short-term and long-term borrowed money divided by total liabilities ((BHCK2309 + BHCK4062 + BHCK2332 + BHCK2333) / (BHCK2170 - BHCK3210)).

Hypothesis 4

- 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 5

- Companies with higher marginal tax rates will be more likely to issue TPS during both accounting periods.
  - 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. All companies that report data for item BHCKA507 on Schedule HC-IC – Additional Detail on Capital Components from 1997 - 2004 are retained in the sample.

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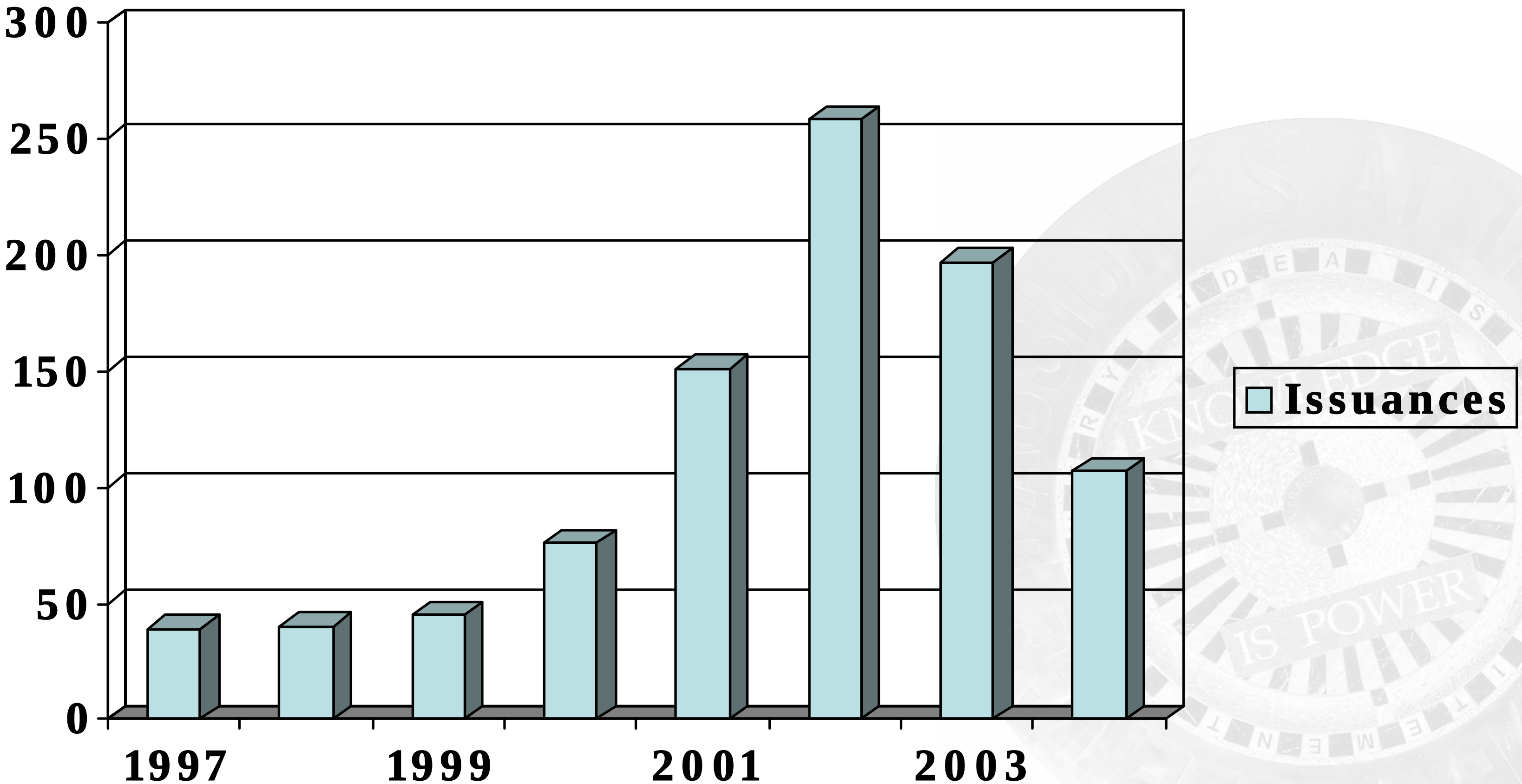
Research Design

$$
\begin{aligned}
\text{Issue} = \alpha &+ \beta_1 \text{Post} \\
&+ \beta_2 \text{ Public} \quad + \beta_3 \text{Public*Post} \\
&+ \beta_4 \text{Debt} \quad + \beta_5 \text{ Debt*Post} \\
&+ \beta_6 \text{ Capital} \quad + \beta_7 \text{ Capital*Post} \\
&+ \beta_8 \text{ LowCap} + \beta_9 \text{ LowCap*Post} \\
&+ \beta_{10} \text{ Tax} \quad + \beta_{11} \text{ Tax*Post} \\
&+ \beta_8 \text{ Loans} + \beta_9 \text{ Size} + \beta_{10} \text{ NoPool} + \varepsilon
\end{aligned}
$$

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.

TPS Issuance By Year



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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	0.077	0.051	0.026	9.29
	Post	0.064	0.062	0.002	0.38

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

TPS Issuance vs. NoTPS - Pre and Post Logit Results

Variable	Sign	Coefficient	t-statistic
Post	–	-2.423	-2.36
Public	+	0.366	3.21
Public*Post	–	-0.608	- 2.25
Debt	+	2.823	3.41
Debt*Post	–	-4.947	-2.55
Capital	–	-20.482	-5.63
Capital*Post	+/-	-4.695	-0.51
Lowcap	+	0.369	2.29
Lowcap*Post	+/-	-0.201	-0.56
Tax	+	0.525	1.65
Tax*Post	+/-	1.303	1.85

Supplemental Analysis

- The accounting change might create an incentive to redeem outstanding TPS.
- This possibility is only available after the call protection on the TPS has expired.
- Ideally, I would compare banks that did redeem to those that could of but chose not to.
- I compare banks that issue TPS versus those that redeemed the securities during the post accounting change period.

Sensitivity Analyses

1) One observation per bank was randomly selected to reduce potential dependence in the data. The results are very similar if all observations are included.

2) The logit includes both a continuous and a dichotomous measure of regulatory capital. Including either of these separately produces similar results.

3) Allowing the coefficients on size and loans to differ in the post period produces insignificant coefficients on the interacted variables and does not alter the inferences on the other variables.

4) The coefficient on a separate goodwill variable is positive and significant in both periods. Post is not significantly different from pre.

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.

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