

Discussion of  
“Accounting for Banks, Capital Regulation, and  
Risk-Taking”  
by Jing Li

Robert L. McDonald

Kellogg School, Northwestern University

October 14, 2010

# Overview

- ▶ Interesting and important question: What are the welfare effects of different accounting systems for banks?
- ▶ Comparison of three accounting systems with respect to social welfare: historic cost, lower of cost or market, and fair value.
- ▶ Effects at work (not all explicitly modeled) include:
  - ▶ costly effort by bankers to find *risky* projects
  - ▶ capital requirements to control risk-taking
  - ▶ cost of violating capital requirements
  - ▶ deposit insurance
  - ▶ value of liquidity provision (deposits) by banks
  - ▶ divergence between goals of short-term and long-term investors
- ▶ The model is complicated but models of banks usually are
  - ▶ The question lurking in the background: Is it necessary that insured deposits are used to fund loans
  - ▶ This structure drives everything in the paper

## General reactions

- ▶ The model is complicated yet skillfully solved
- ▶ The paper makes the important point that accounting rules and capital rules should be jointly determined
  - ▶ The paper looks at the incentive effects of accounting assuming that capital requirements are set optimally given the accounting regime
  - ▶ This is the right way to pose the question
- ▶ Paper could do a better job of teasing apart and explaining the economic interpretation of the results
- ▶ The accounting system in the paper does only a small part of what accounting systems do in practice
- ▶ I would hesitate to base policy on this model, but it does suggest issues that should be considered

# The Bank

- ▶ Investments can be either risk-free (zero NPV) or risky
- ▶ Banks pay an investigation cost to have a greater probability of locating risky and higher mean investment opportunities
  - ▶ What if investigation yielded *only* either more mean or more variance?
  - ▶ Project quality is privately known by the bank
- ▶ Banks issue insured deposits  $D$  and equity  $K$  to finance investments
  - ▶ Incentive to maximize the use of insured deposits

# Regulation

- ▶ Deposits are insured at an unfair price
- ▶ At  $t = 0$ , the bank chooses capital (all-deposit finance is optimal without a capital constraint)
- ▶ At  $t = 1$ , the bank pays a convex cost for violating the capital constraint.
  - ▶ **This only occurs if the bank reports negative earnings at time 1**
  - ▶ Whether a bank might report negative earnings depends on the accounting system
- ▶ At  $t = 2$  the bank is liquidated.
- ▶ Regulator picks a different capital requirement under each accounting scheme
- ▶ Goal is to maximize social welfare

# Information and Investors

- ▶ The bank *internally* generates an informative signal,  $G$  or  $B$ , about its project. This signal is filtered through the accounting system, and investors infer a value of earnings based on the signal
  - ▶ Whether or not the signal is released at all depends on the accounting system
- ▶ It is assumed that investors care about this signal, but there are no real consequences associated with the inferred market price
  - ▶ Investments are not affected
  - ▶ Management is not compensated or fired
  - ▶ There is no takeover market for a poorly performing bank

# Accounting Regimes

- ▶ There are three accounting regimes:
  - ▶ **Historical cost** No earnings are released. No consequences for capital and investors receive no signal
  - ▶ **Lower of Cost or Market** Only release a signal if the news is bad, in which case capital is reduced
  - ▶ **Fair value** Release a signal in any event, in which case capital may be written up or down and investors may benefit from positive reported earnings
- ▶ The actual performance of the project, whether good or bad, does not affect regulatory capital or cause the bank to incur a cost
- ▶ The accounting system plays an outsized role, which it seems to in reality also

# Equilibrium and Social Welfare

- ▶ Regulators maximize social welfare.
- ▶ There is an exogenous cost of equity capital added to the model (equity reduces liquidity provision)
- ▶ Different accounting systems impose different costs and benefits of good and bad signals, both at the shareholder level and by imposing a cost for insufficient capital.
  - ▶ Different accounting systems therefore create different incentives
- ▶ Generally historic cost accounting is least desirable (there are no capital penalties), lower of cost or market performs best.
- ▶ Fair value is hurt by creating an incentive to take the risky project
  - ▶ Is this really the problem with fair value accounting?
- ▶ It would be interesting to study an optimal accounting system. What would it look like?

# The Role of Accounting

- ▶ Accounting in the paper is solely a tool for regulators
- ▶ In practice accounting is critically important for *investors*, who do not matter in this one-shot model
  - ▶ Governance depends on accounting
  - ▶ The stock price and hence resource allocation depend on accounting
  - ▶ Regulators may learn from investors (This is one interpretation of the crisis: investors sounded the alarm about bankrupt institutions)
- ▶ In this paper fair value accounting increases risk taking (and raises average returns)
  - ▶ Is this likely to be a robust result?
- ▶ Big criticism of fair value accounting is manipulation
  - ▶ This is what auditors, courts, and class action lawyers deal with
- ▶ Regulators presumably are in the best position to look *through* any accounting system! This isn't allowed (and may not happen much in practice)

# The Role of Banks

- ▶ This paper and much of the banking literature presumes that it is optimal to have deposit-financed loans
  - ▶ Papers such as Calomiris and Kahn (1991) and Diamond and Rajan (2000) justify this arrangement
  - ▶ It is easy to see how such institutions arose historically, not obvious that they are still optimal
  - ▶ With modern IT and financial engineering, narrow banking and equity-financed lending institutions would serve a different role than 100 years ago
  - ▶ Regulation makes it hard *not* to look like a modern bank