Comments by Rafael Repullo on

Theory and Practice of Banking Regulation

by

Xavier Freixas and Jesús Saurina

Moneda y Crédito

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Introduction

- **Purpose of paper**

  "Survey advances in the theory and practice of banking regulation, stressing shortcomings and challenges."

- **Structure of paper**

  - Introduction and conclusion   5%

  - Market failures in banking   12%

  - Banking regulation   14%

  - Core principles   26%

  - Basel II   29%

  - Implications of Basel II   14%

Structure of discussion

- **General comment**

  - Too much description, too little analysis and criticism.

- **Specific topics**

  - Benevolent vs. self-interested regulators.

  - Incentive effects of safety net.

  - Equilibrium effects of transparency.

  - Optimal capital regulation.

  - Procyclicality.

- **Final remark**

1. Benevolent vs. self-interested regulators

- Regulators are not necessarily social welfare maximizers.

- *Ex ante* may weigh too much safety rather than efficiency:

  - Protect oligopoly rents to foster prudent behavior.

  - Require high capital requirements.

- *Ex post* may abuse discretion:

  - Forbearance of prudential regulations.

A simple model

- Risk-neutral bank

- At date 0

  - Bank raises $1-k$ insured deposits and k capital.

  - Bank invests in risky asset.

  - Bank chooses parameter p.

- At date 1

  - Return from investment

$$R = \begin{cases} R(p), & \text{with probability } p \\ 0, & \text{with probability } 1-p \end{cases}$$

A simple model

- **Assumptions**

  - Deposit rate $= r$

  - Expected return required by shareholders $\delta > r$

  - $R(p)$ is decreasing and concave (Allen and Gale, 2000).

- **Bank's objective function**

$$V = p[R(p) - (1-k)(1+r)] - k(1+\delta)$$

A simple model

- **Determination of k**

$$\frac{\partial V}{\partial k} = p(1+r) - (1+\delta) < 0 \rightarrow \boxed{k = \bar{k}}$$

- **Determination of p**

$$\frac{\partial V}{\partial p} = 0 \rightarrow \boxed{pR'(p) + R(p) = (1-\bar{k})(1+r)}$$

A simple model

- **Results**

  - $\dfrac{\partial p}{\partial r} < 0 \rightarrow$ Higher deposit rates imply higher risk

  - $\dfrac{\partial p}{\partial \bar{k}} > 0 \rightarrow$ Higher capital implies lower risk

2. Incentive effects of safety net

- **Traditional view**

  "The existence of a safety net has externalities, since it is an incentive for banks to take more risk."

- **New results**

  - Lender of last resort has no effect on risk-taking.

  - Deposit insurance may foster prudent behavior.

Another simple model

- Risk-neutral bank

- At date 0

  - Bank raises d insured and $1-d$ uninsured deposits.

  - Bank invests in risky asset.

  - Bank chooses parameter p.

- At date 1

  - Return from investment

$$R = \begin{cases} R(p), & \text{with probability } p \\ 0, & \text{with probability } 1-p \end{cases}$$

Another simple model

- **Assumptions**

  - Interest rate of insured deposits = 0

  - Interest rate of uninsured deposits = $r > 0$

  - $R(p)$ is decreasing and concave.

- **Bank's objective function**

$$V = p[R(p) - d - (1-d)(1+r)]$$

Another simple model

- **Determination of p**

$$\frac{\partial V}{\partial p} = 0 \rightarrow \boxed{pR'(p) + R(p) = d + (1-d)(1+r)}$$

- **Result**

- $\dfrac{\partial p}{\partial d} > 0 \rightarrow$ Higher insured deposits implies lower risk

3. Equilibrium effects of transparency

- **Basel II view**

  Greater transparency "can produce significant benefits in helping banks and supervisors to manage risk and improve stability."

- **New results**

  - Morris and Shin (*AER*, 2002) show that "the welfare effect
  - of increase public disclosures is ambiguous."

- **Common sense**

  - Would you reveal confidential supervisory information?

4. Optimal capital regulation

- **Basel II view**

  "The new framework should at least maintain the current overall level of capital in the system."

- **Criticism**

  - Why should the current overall level of capital be optimal?

  - Why should one use a statistical confidence level (rather than an economic criterion) to compute IRB requirements?

- **Alternative**

  - Model costs and benefits of capital requirements.

5. Procyclicality

- **Basel II view**

  "The stability of the international financial system will be substantially reinforced with Basel II."

- **Criticism**

  - Basel II may amplify business cycle fluctuations.

  - *Ex post* credit crunches (and forbearance) in downturns.

  - *Ex ante* insufficient capital buffers in expansions.

A specific proposal

- **Gordy's conjecture**

  "Regulators and bankers <u>will</u> find a way to smooth required capital over the business cycle."

- **Two alternatives**

  - Smooth the input: Through-the-cycle ratings.

  - Smooth the output:

    - Vary capital charge on risk-weighted assets.

    - Report risk-weighted assets (for market discipline).

Final remark

- Regulators should pay more attention to academic research.

- Academics should devote more attention to banking issues:

    - Determinants of cost of bank capital.

    - Contagion and banking crises.

    - Optimal design of safety net.

    - Political economy of regulation.