

# “The Relationship between Capital, Liquidity and Risk in Commercial Banks”

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# I- Motivation and Method



- U.S. commercial banks : decision making on capital, risk and liquidity from 2001 till 2009
- Extension of the simultaneous equation model with partial adjustment introduced by Shrieves and Dahl (1992)

## II - Economic Theory and Econometrics



- “*It does require **maturity** to realize that **models are to be used** but not to be believed*”. Henry Theil , Principles of Econometrics.
- Economics is the master, econometrics should be the servant.
- Economics - Paper needs a section discussing the incentive structure confronted by decision makers in commercial banks.

# III – What does Economics tell you about bankers' decisions on capital , risk , and liquidity

## 1. Characteristics of banks

- Illiquid
- High leverage ratios
- Banking needs deposit insurance
- Information asymmetries : can hide problems for a considerable time

## 2. Issues on incentives

- Principal – agent chain
  - ✓ Managers vs board of directors vs shareholders
  - ✓ The above vs tax-payers ( the silent shareholder )
    - ✧ Deposit insurance
    - ✧ Too big to fail
- Incentives for moral hazard
- Free rider problem



3. Problem : Bankers confront a fortunate bet :

- Huge upside ( high leverage, insured liabilities )
- Limited downside ( relative low capital, limited liability )

4. Therefore there is a built in tendency towards taking too much risk for any given capital or liquidity. An incentive compatibility problem ( i.e. Leo Hurwicz )

3. Recurrent and expensive crisis show that regulatory standards (now Basle III ) and supervision have been ineffective to tackle the incentive compatibility problems
4. The econometrics testing has to depart from the “prior” that banks tend to take too much risk
5. The regulatory challenge is : what are the most effective regulations / supervision to limit risk taking while minimizing “deadweight losses”
  - Basel III
  - Volker rule
  - Derivatives and off-balance sheet
  - Dodd- Frank

# IV- Normal times ( 2001-07 ) and times of crisis (2008-09)

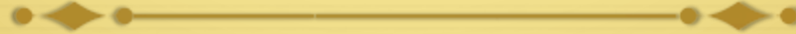


Paper states as finding :

*“Banks differ in the way they adjust their capital, liquidity and risk in the regular and distress times.”*





# In normal times .....



- Banks can make broad choices
- Banks can interact and transact with other financial institutions and agents in the market, because there is working capital market. Specifically, banks are able to:
  - ✓ borrow or lend in the interbank market
  - ✓ package and securitize loan portfolios
  - ✓ increase capital by floating equity or raise Tier 2 capital by issuing preferred equity or subordinated loans
  - ✓ sell stocks or real estate they hold to raise liquidity
- This is particularly so in times of financial exuberance, like the 1990s and the 2000s.

# But in times of crisis.....

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- Bank have limited choice because :
    - ✓ The interbank market freezes
    - ✓ Securitization dies down
    - ✓ Impossible to raise equity or debt
    - ✓ They can sell stocks but only at fire- sale prices
  - If the process is left to its own dynamics, it leads to a “debt- deflation” world like the one described by Irving Fisher in his 1936 article in Econometrica
  - To prevent that Central Banks make up for it by creating a life support system but forece upon banks the conditions to use it

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- In times of crisis the system is closer to central planning than to market interaction
  - Thus I go back to your claim :

*“Banks differ in the way they adjust their capital, liquidity and risk in the regular and distress times.”*

- Rather, banks are forced by the Central Bank to take less risk and improve capital adequacy and liquidity
- But it the point it is not a free choice but decisions forced onto them by the authorities

# V- Other issues

- The relevant variable is relative capital adequacy and relative liquidity ( Unless in countries that have their own currency )
- Reserve requirements
  - For liquidity reasons
  - As instrument of monetary control
  - Central banks can monitor banks easier