

A Discussion of “Monitoring And The  
Acceptability of Bank Money,”  
by Regis Breton

Cyril Monnet

University of Bern and Study Center Gerzensee

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# A Crisis Narrative

- ▶ Global savings glut increased demand for US safe assets
- ▶ ... matched by supply of possibly safe ABS through rise in Originate-to-distribute bank model
- ▶ ... rated as safe by rating agencies
- ▶ ... and considered as such by Wall Street
- ▶ ... increased banks' incentives to take on risk
- ▶ ... until... collapse...

# A Crisis Narrative

- ▶ ... no more shadow banking, and other dark pools.
- ▶ Transparency!
- ▶ Holmstrom (2012) Why did no one in Wall Street ask questions?
- ▶ Answer: Because ABS/securitization are structured that way (Dang, Holmstrom, Gorton, 2012)

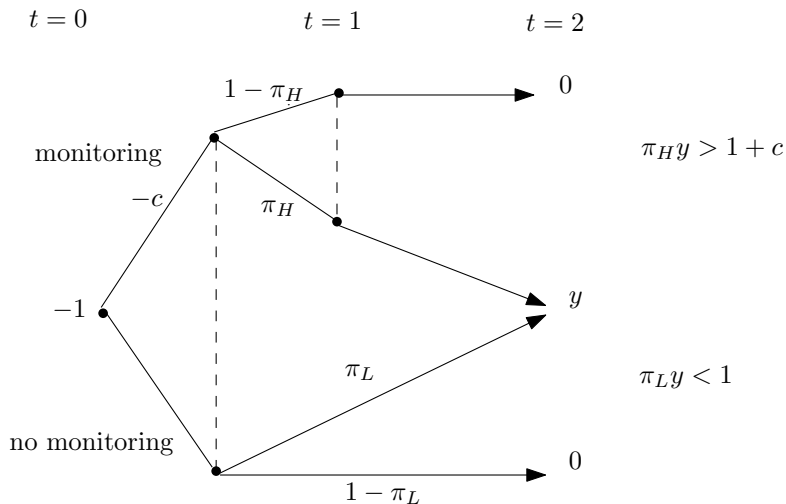
## Regis, Why did no one ask questions?

- ▶ Because it is a bank's job to supply liquid assets, i.e. assets that agents can trade quickly without having to worry about insider's information.
- ▶ Leave this to the market and you'll have to worry about insider's information.
- ▶ Structure the bank's contract correctly and you won't have to worry about insider's information.
- ▶ Regis' caveat: Allow banks to securitize and it'll be back with a vengeance.
- ▶ Increase transparency, and you'll have to worry about liquidity. "What matters for liquidity is not the amount of information society has about assets, but the *distribution* of that information."

# The Environment

- ▶ 3 periods:  $t = 0, 1, 2$
- ▶ 2 groups of risk neutral agents: Early and late boomers.
- ▶ Late boomers born at  $t = 1$ ,
  - ▶ endowed with  $e_1 \gg y$ , and storage,
  - ▶  $v(c_1, c_2) = c_2$ .
- ▶ Early boomers born at  $t = 0$ ,
  - ▶ endowed with  $e_0 = 1$ , storage and a LT technology,
  - ▶  $u(c_1, c_2) = \lambda(\rho c_1 + c_2) + (1 - \lambda)(c_1 + c_2)$  with  $\rho > 1$ .
  - ▶ Liquidity shock is private information.

# The Long-Term Technology



# Source of Private Information

1. Monitoring
2. Liquidity shock
3. Signal (good or bad projects)

# Two Benchmarks

- ▶ **First best** (no private info)
  - ▶ Early boomers invest and monitor
  - ▶ Impatient with good projects sell to late boomers for  $y$
  - ▶ All other agents hold
  
- ▶ **Autarky**
  - ▶ Either:
    - ▶ Early boomers invest, monitor, and hold to maturity
  - ▶ Or:
    - ▶ Use storage and consume early if patient
    - ▶ good option relative to LT investment if  $\rho \gg 1$



# Two arrangements

- ▶ Markets
- ▶ Financial intermediaries

## Market

- ▶ Markets do poorly if relatively few good projects would be sold
- ▶ Precisely, cannot do better than autarky if

$$\rho \frac{\lambda \pi_H y}{\lambda + (1 - \lambda)(1 - \pi_H)} < y$$

i.e. keeping a good project better than selling for liq. reason

- ▶ Suppose the market is active. Who sells?
  - ▶ Impatient with good or bad projects ( $\lambda$ )
  - ▶ Patient with bad projects ( $(1 - \lambda)(1 - \pi_H)$ )
- ▶ Number of good projects sold:  $\lambda \pi_H$ . So price of a project is

$$\frac{\lambda \pi_H y}{\lambda + (1 - \lambda)(1 - \pi_H)}$$

- ▶ There is no screening possible.

# Delegation

- ▶ A bank deals with  $N$  projects and promise  $R$  at  $t = 2$
- ▶ The bank monitors each of the  $N$  projects
- ▶ Depositors have no info: Sell their certif of dep. for  $\pi_H R$
- ▶ The bank cannot sell its portfolio (there is no securitization)
- ▶ Bank should monitor:  $R$  can't be too high
- ▶ Bank achieves payoff  $V^{**} \in (V^{aut}, V^{FB})$ .

# Comments

- ▶ Very clear and neat paper.
- ▶ Ahead of the curve by (easily) 8 years.
- ▶ The value of dynamic contracts.
- ▶ Optimal level of opacity.
- ▶ Other.

# Dynamic contracts

- ▶ A dynamic contract looks like:
  - ▶ If project succeeds, then can sell again next period.
  - ▶ If project fails, then lose market license.
- ▶ Reputation does a lot in this case.
- ▶ OTD model based on reputation and retention (graph).
- ▶ Here, there is no securitization as the bank cannot sell.

# Originate to distribute

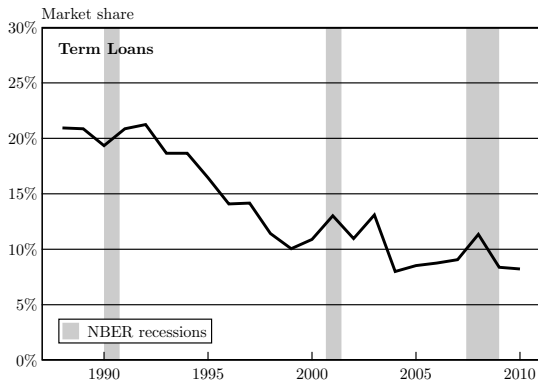


Figure: Source: Board and Santos (2012)

## Optimal level of opacity

- ▶ Regis does not take a stance on the optimal level of opacity.
- ▶ Allocating resources to impatient is good.
- ▶ Monitoring is useful.
- ▶ Full transparency: Unlucky impatient won't consume
- ▶ Same with bank with aggregate shock

## Optimal level of opacity

- ▶ Regulators/other view fraud as a side product of opacity
- ▶ Right approach: Design contract to ensure the bank “monitors”
- ▶ Still, may be worth “unbundling” screening and monitoring activities
- ▶ Which activities require more transparency?
- ▶ We want to ensure “good practice”, but should not be informed about the result



# Unbundling

- ▶ Pay a screening cost  $-c_s$  to pick  $\pi_H$ -project
- ▶ Pay a monitoring cost  $-c_m$  to make sure the project succeeds
- ▶ Monitoring introduces a moral hazard problem: Will the bank monitor?
- ▶ Market solution: Equilibrium with screening, but no monitoring?
- ▶ Suppose market price is  $q$  (and  $q \leq p_H y$ ). Investors do not monitor if

$$\frac{c_m}{1-\lambda} \geq (1-p_H)q$$

- ▶ Some screening if

$$(p_H - p_L)y \geq \frac{c_s}{1-\lambda}$$

- ▶ Screening is a mixed equilibrium (otherwise, free-ride on everybody else's screening)
- ▶ Can a bank do better?

## Other Comments

- ▶ Banks useful if

$$\rho \frac{\lambda \pi_H y}{\lambda + (1 - \lambda)(1 - \pi_H)} < y$$

i.e.  $\lambda$  and/or  $\rho$  small: when liquidity is less valued.

- ▶ In other words, a market can implement the first best when the liquidity needs are severe ( $\lambda \rho$  is high).
- ▶ Banking analysis is complicated by the fact that the banker is selected from early boomers, and can have a liquidity shock: needs to be compensated for this.
- ▶ Set  $\pi_L = 0$ ? ( $\pi_L$  is only needed to give a bank the incentive to monitor).

# Literature

1. Dang-Holmstrom-Gorton (2009) "Opacity and the Optimality of Debt for Liquidity Provision."
2. Holmstrom (2012) "The Nature of Liquidity Provision: When Ignorance is Bliss," AEA Presidential Address.
3. Dang-Holmstrom-Gorton-Ordonez (2012) "Bank As Secret Keepers."
4. Monnet-Quintin (2013) "Rational Opacity."

# Conclusion

- ▶ Is opacity a goal or a side effect of banking activities?
- ▶ Breton (2007) claims it is a goal.
- ▶ Diamond (1984) claims it is a side effect.
- ▶ Policy conclusions depend on which side you take.

## Screening

- ▶ Suppose market price is  $q$  do I want to monitor?
- ▶ Monitor if payoff is higher,

$$-c_m + \lambda \rho q + (1 - \lambda)[\tilde{p}y + (1 - \tilde{p})q] \geq \lambda \rho q + (1 - \lambda)[\max\{\tilde{p}y; q\}]$$

or

$$\tilde{p}y + (1 - \tilde{p})q - \max\{\tilde{p}y; q\} \geq \frac{c_m}{1 - \lambda}$$

- ▶ screening equilibrium implies  $\tilde{p} = p_H$  and  $p_H y > q$  then monitor iff

$$(1 - p_H)q \geq \frac{c_m}{1 - \lambda}$$

- ▶ screening mixed-equilibrium implies for bad projects:  $\tilde{p} = p_L$  and  $p_L y < q$  then monitor iff

$$p_L(y - q) \geq \frac{c_m}{1 - \lambda}$$