

Discussion of:  
“Collateral Booms and  
Information Depletion”

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# General Theme

- Literature on “credit booms / credit cycle”
  - loans that are made in good times are “different”: lower informational quality
- Main idea: pecking order between use of collateral vs. screening
  - If collateral is worth enough to reassure lender, no need for screening
  - Screening becomes necessary only when collateral has low value
- Main results:
  - Periods of booms: collateral is high; little screening
  - Periods of Busts: collateral falls, move to screening, overhang of unscreened capital
  - Longer booms → Larger Busts
  - Public policy: no scope for intervention; efficient cycles

# Outline

- Quick summary of the model
- Comments

# Model

- Ingredients: (1) Moral Hazard + (2) stickiness in informational quality
- Capital is Screened or Unscreened (forever): vintage effect
- Screening is costly (convex costs: certifiers are scarce)
- Screened capital has no moral hazard issues (generates fully pledgeable income)
- Unscreened capital is “opaque” with probability  $(1 - \mu)$ : proceeds will be diverted by entrepreneur

# Remark

information production by finance industry

- Screening the collateral (no cost in this paper)
- Screening the entrepreneur (no heterogeneity in this paper)
- Screening the technology/project : this paper

# Pecking-order intuition

- First saturate your capacity to use unscreened capital by using wealth
- Then, use screened capital as far as it remains profitable (given convex cost of screening)

# Key equation

Value of collateral

$$\rho \cdot (k_{t+1}^U - q_t) = \mu \cdot [E_t(r_{t+1})k_{t+1}^U + (1 - \delta)k_{t+1}^U]$$

Market rate

Unscreened&Uncollateralized  
Capital

# Key equation

$$\rho \cdot \underbrace{(k_{t+1}^U - q_t)}_{\text{Unscreened \& Uncollateralized Capital}} = \mu \cdot \left[ \underbrace{E_t(r_{t+1}) k_{t+1}^U}_{\text{Flow of Profits}} + \underbrace{(1 - \delta) k_{t+1}^U}_{\text{Liquidation value}} \right]$$

Value of collateral

Probability capital can be diverted

Market rate

Flow of Profits

Liquidation value



# Key equation

Value of collateral

$$\rho \cdot (k_{t+1}^U - q_t) = \mu \cdot [E_t(r_{t+1})k_{t+1}^U + (1 - \delta)k_{t+1}^U]$$

Market rate

Unscreened&Uncollateralized  
Capital

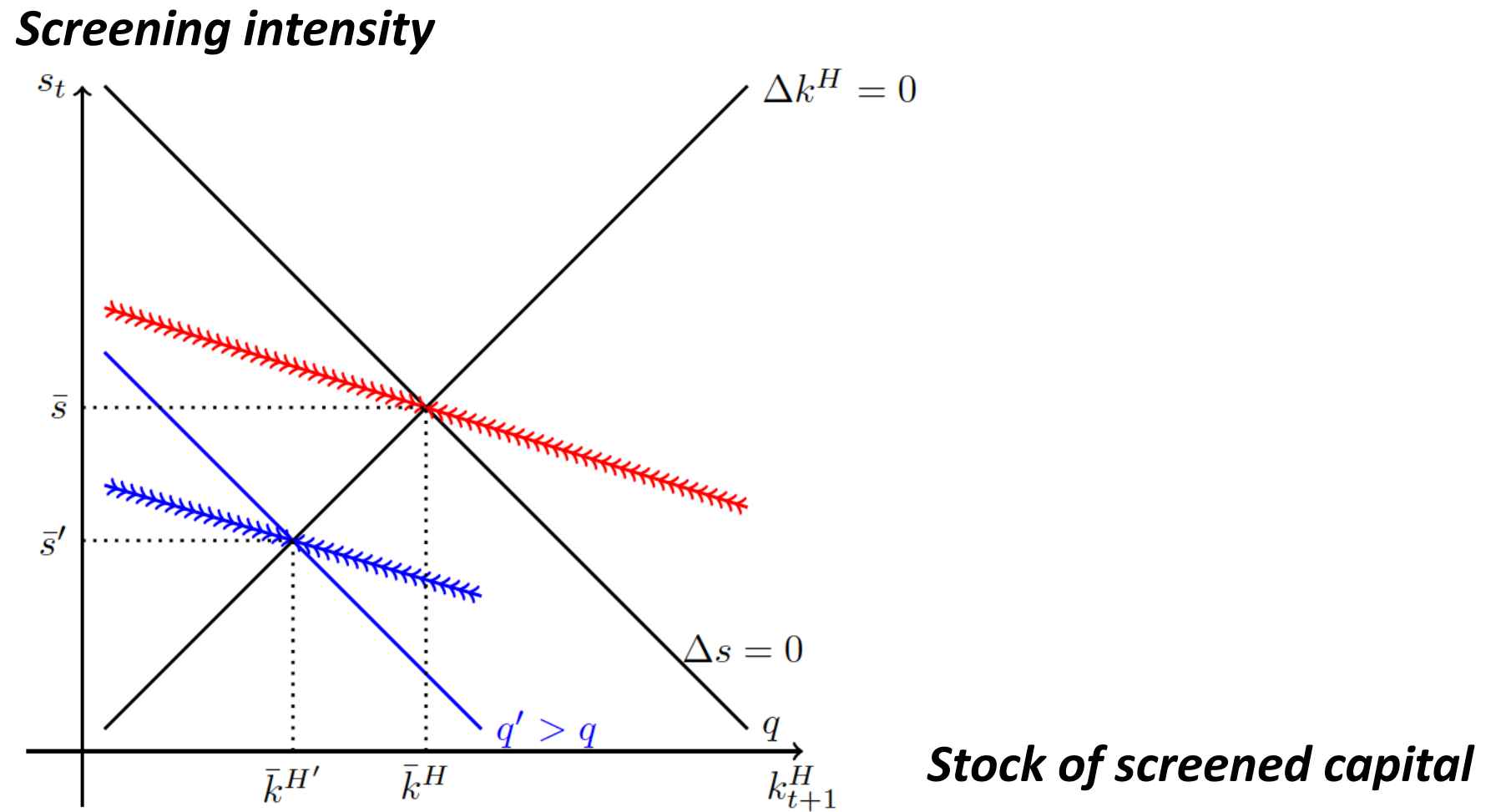
Pledgeable cash flows  
Coming from all Unscreened capital

# Key equation

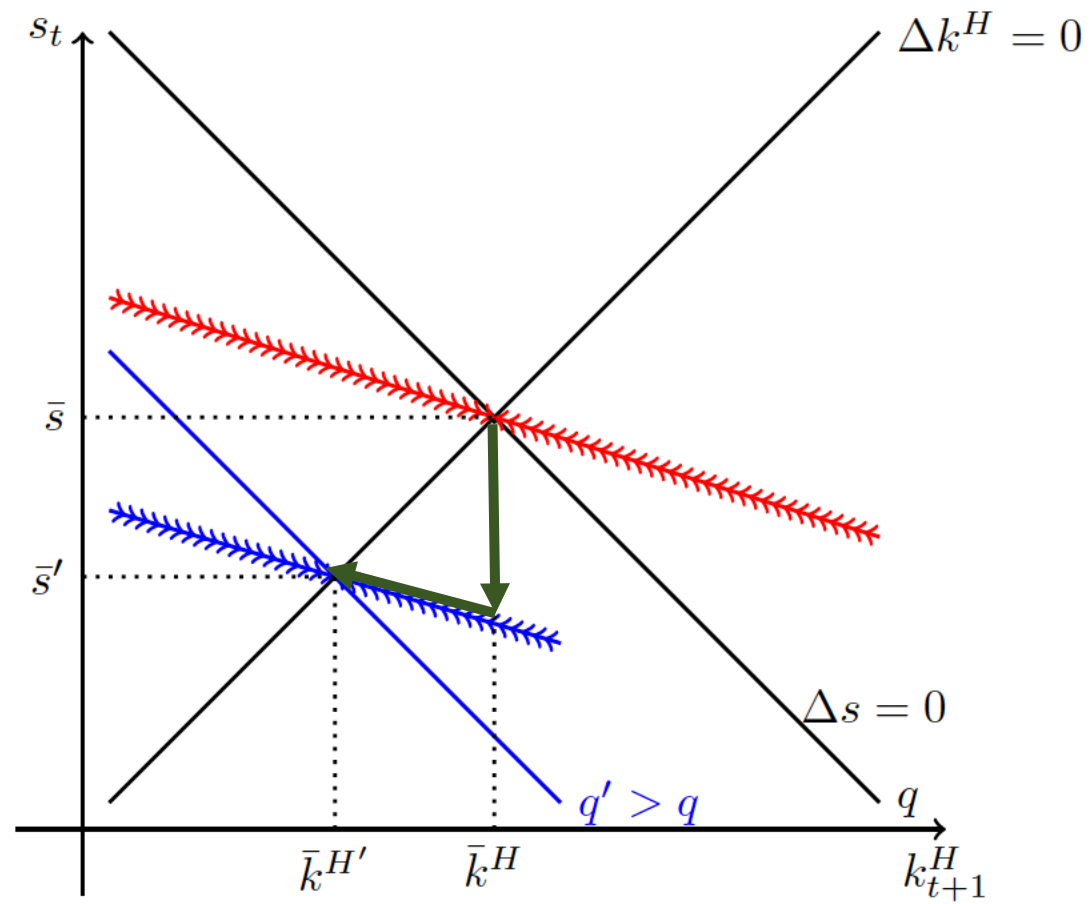
$$\rho \cdot (k_{t+1}^U - q_t) = \mu \cdot [E_t(r_{t+1})k_{t+1}^U + (1 - \delta)k_{t+1}^U]$$

$$k_{t+1}^U = \frac{1}{1 - [E_t r_{t+1} + (1 - \delta)]\mu/\rho} q_t$$

# Graph



# Graph



# Comment 1 : Ancestors

- Part of the Austrian Business cycle literature
  - Liquidationist view of the credit cycle
    - Rognlie, Matthew, Andrei Shleifer, and Alp Simsek. 2018. "[Investment Hangover and the Great Recession.](#)"
    - Paul Beaudry, Dana Galizia, Franck Portier, "Reconciling Hayek's and Keynes' Views of Recessions", 2018
- Shares the same issues:
  - Bust is optimal, Information production and lending should not be restricted
  - Consumption quite smooth (?)

# Comment 2: Modelling

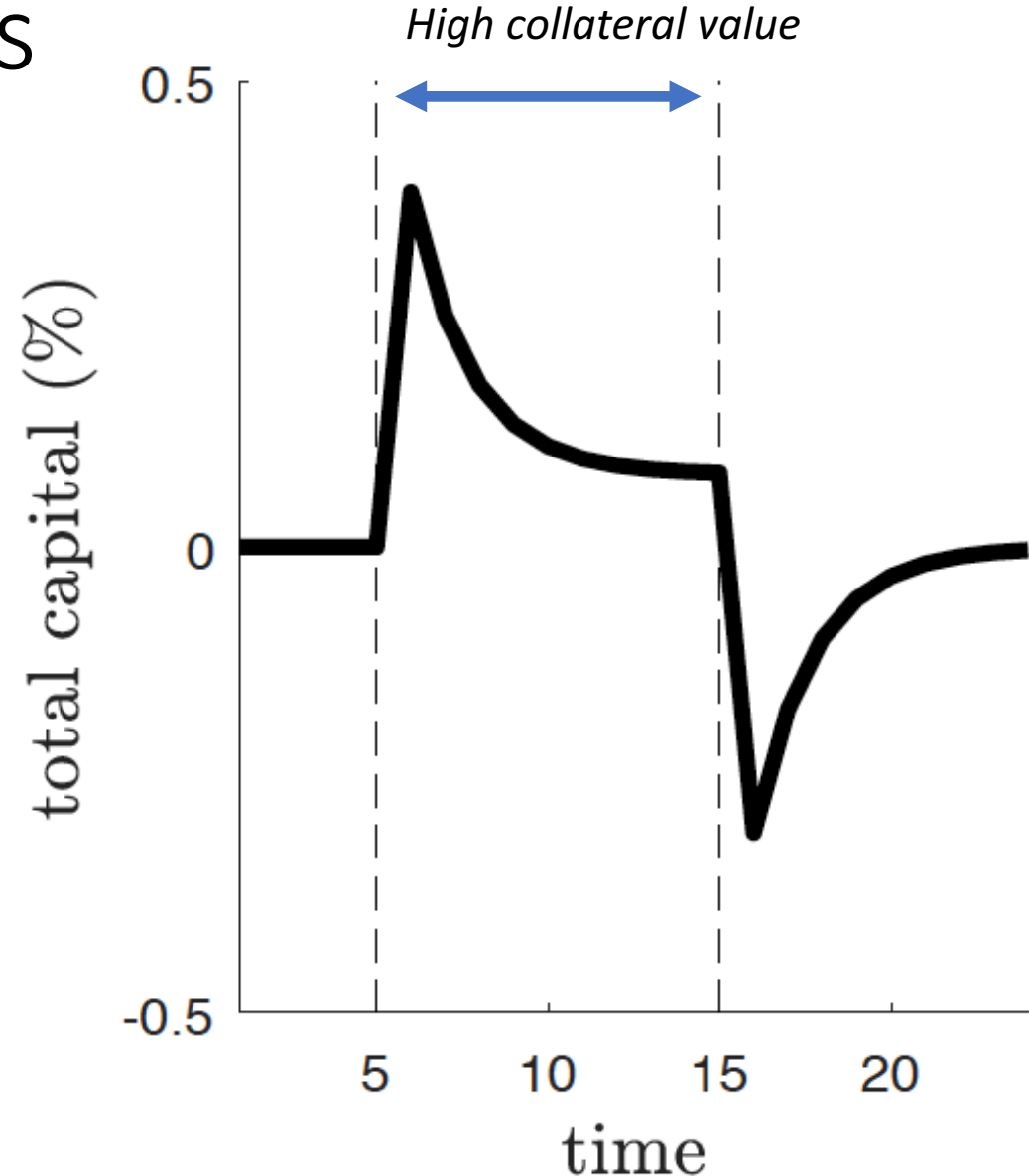
- Collateral value exogenous
- Assumption that capital cannot be screened ex-post seems strong. Is it key?

# Comment 3: Interpretation

- Why 2 types of capital rather than 2 sectors :
  - opaque vs. non-opaque sector
- Is K vintage effect an important dimension? (cf. empirics)
- Could be a model of debt vs. equity ?

# Comment 4: Predictions

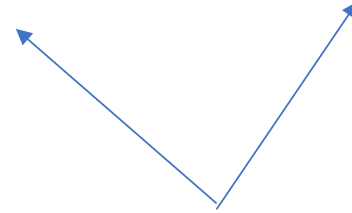
- How far from calibratable?
- Counterfactual predictions?
  - Capital decline starts before collapse of collateral value
  - What about consumption?
- Contrast with Behavioral view:
  - Lax lending in booms due to expectations mistakes





# Empirics: firm-level

$$Info_{it} = \alpha_i + \delta_t + \beta \cdot RE_{it} + \gamma \cdot P_{kt} + controls_{it} + \varepsilon_{it},$$



Instrumented with Saiz(2010)  
elasticity instrument

Two proxies:

1. Duration of main lending relationship
2. Number of analysts

# Comment 3: Empirics

- High distance to the theory: vintage of capital idea disappears
  - In the empirical part, information production is about *stock of capital*, not incremental investments
- Maybe could explore more direct predictions of model, like :
  - Dynamics of cost of screening
  - Vintage effects: Do firms that are born during credit booms suffer more when real estate collapses?

# Empirics

Information production variables unaffected by credit cycle in time series

How to interpret it in terms of the model? Cost of screening going down?

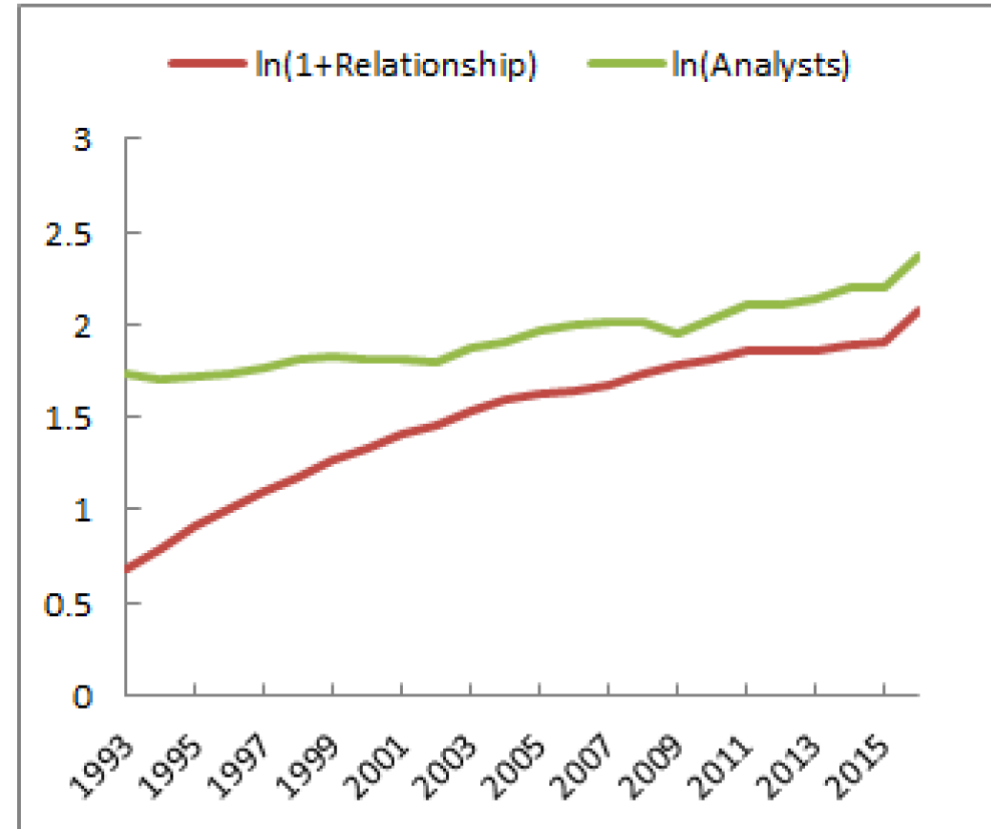


Figure 9: Firm-level information

# Conclusion

Very nice and creative model

Opens up the issue of the production function of information along the cycle

Punchline: Not so obvious “lax lending” during credit booms is inefficient