

# MICROECONOMICS OF BANKING



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## General introduction



# MICROECONOMICS OF BANKING

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- Objectives
  - To understand why banks exist
  - To understand the rationality of credit contracts
  - To understand the relationships between banks and economic agents (firms, consumers)
  - To understand bank risks and the need for regulation



# MICROECONOMICS OF BANKING

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- Three parts in that introduction
  - The main questions
  - How to answer?
  - The birth of the microeconomics of banking: the Klein-Monti Model



# 1-THE MAIN QUESTIONS

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- Why do banks exist?
  - Banks or financial markets: which are better?
  - Banks and financial markets? The links
  - The future of banks in the financial system?
- The credit market: is it in equilibrium?
  - Price (interest rate) rigidity
  - Evidence of credit rationing
- Banks deposits and liquidity
  - Banks deposits as an insurance against the risk of illiquidity
  - The « bank run » as a bad equilibrium



# 1-THE MAIN QUESTIONS

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- Banking regulation
  - Should we regulate the banks?
    - Banking stability=a public good
    - The « moral hazard » problem
  - How to regulate?
    - Deposit insurance
    - Risk-based capital requirements
  - Mergers and acquisitions in banking industry: good news or bad news?
    - Bank size and the credit rationing problem
    - The « too big to fail problem »



# 1-THE MAIN QUESTIONS

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- Banks and financial markets
  - Why banks need to speculate?
- Structuring the relationships between firms and banks
  - The standard debt contract
  - Which main bank for a firm?
  - How many banks in the bank pool of the firm?
- Banking strategies
  - Relationship banking?
  - Transaction banking?



# 1-THE MAIN QUESTIONS

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- New contracts and new trends in banking
  - The lease-borrow problem
  - The foundations of microcredit
  - Islamic banking
- Optimal financial architecture
  - Banks and financial markets in modern economies



## 2-HOW TO ANSWER

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- Neo-classical theory of banking
  - The bank as a neo-classical firm
    - Max Profit
    - Decision variables=interest rates
    - The Klein/Monti Model
  - But
    - Banks are supposed to exist!



## 2-HOW TO ANSWER

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- The theory of financial intermediation
  - Hypothesis=asymmetric information
    - Between savers and borrowers
    - Banks produce information
  - The theory of contracts
    - Focus on contracts between agents
  - Main interest
    - Legitimizes banks as rational organizations



# 3-THE KLEIN-MONTI MODEL

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- Objectives: To present the 1st model of the banking firm
  - the Klein/Monti model



# 3-THE KLEIN/MONTI MODEL

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Balance-sheet

T-bonds $G(g)$	Deposits $D(r)$
Loans $L(R)$	
	Equity $S$



# 3-THE KLEIN/MONTI MODEL

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- Balance-sheet equilibrium
  - $L+G=D+S$  (1)
- Cost function  $C(D,L)$
- Profit  $P(L,D)$ 
  - $P=RL+gG-rD-C(D,L)$  (2)
- (1) and (2) give:
  - $P=(R-g)L+(g-r)D+gS-C(D,L)$  (3)



# 3-THE KLEIN/MONTI MODEL

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- First-order conditions to max P
  - $dP/dL=(R-g)+L.R'(L)-C'_L(D,L)=0$  (4)
  - $dP/dD=(g-r)-D.r'(D)-C'_D(D,L)=0$  (5)
- Define the elasticities for:
  - The demand for credit as  $E_L=-L'(R).(R/L)$
  - The supply of deposits as  $E_D=D'(r).(r/D)$



## 3-THE KLEIN/MONTI MODEL

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- That leads to:
  - $1/E_L(R^*)=[R^*-g-C'_L(D,L)]/R^*$  (6)
  - $1/E_D(r^*)=[g-r^*-C'_D(D,L)]/r^*$  (7)
- Conclusions:
  - Elasticities represent the market power of the banks
  - The market power determines the intermediation margin



# 3-THE KLEIN/MONTI MODEL

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- But:
  - $R^*$  et  $r^*$  are independent from each other (suppose that  $C(D,L)=a+bD+cL$ )
  - Which means that assets and liabilities are separately managed
  - Such a conclusion must be rejected and the model too
- Main interest of the model= to focus on the important role of market power of the bank



# REFERENCES

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