

# Economics of Banking

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## Objectives

The objective of this course is

1. to understand the role of financial institutions and the importance of asymmetric information;
2. to explore the modelling of inter-bank competition and implications for financial stability;
3. to measure the most important risk factors for banks;
4. to grasp the concept of systemic risk and the ways it builds up in the intermediation sector;
5. to understand the rationale for banking regulation and analyze critically the impact of post-crisis reforms: the Dodd-Frank act, the Volcker rule, or the European Banking Union.

## Description

The course is taught in English, 3 hours per week for 8 weeks in Semester 2.

### **Mandatory literature:**

Xavier Freixas and Jean-Charles Rochet, "Microeconomics of Banking", 2nd edition, 2008, MIT Press (**FR**);

### **Recommended literature:**

Bengt Holmström and Jean Tirole, "Inside and Outside Liquidity", 2013, MIT Press (**HT**);

Mathias Dewatripont and Jean Tirole, "The Prudential Regulation of Banks", 1999, MIT Press (**DT**);

Hans Peters, "Game Theory A Multi-Levelled Approach", 2008, Springer (**Peters**);

Selected papers for some topics.

## Content

### **Session 1: The nature and functions of banks.**

*What does a bank do? • Banking in the Arrow-Debreu world • Economies of scale and scope • A bank's balance sheet • Different types of banks*

**FR**, Chapters 1 and 2.1; **DT**, Chapter 2.1.

### **Session 2: Banking as liquidity insurance and delegated monitoring.**

*Banks as pools of liquidity: A simplified Diamond and Dybvig (1983) model • The Diamond (1984) model of delegated monitoring • A simple model of moral hazard*

**FR**, Chapters 2.2, 2.4, and 2.5.1.

### **Session 3: Moral hazard, credit rationing, and the role of collateral.**

*Monitoring and capital: A simplified Holmström and Tirole (1997) • Repeated lending and moral hazard • Debt as the optimal contract • Collateral as an instrument to screen borrowers*

**FR**, Chapters 2.5.3, 4.2, 4.3.2, and 4.6; **HT**, Chapter 1.

### **Session 4: Competition, franchise value, and conglomerates**

*Risk-taking behaviour and competition • Risk-taking in bank conglomerates.*

**FR**, Chapters 3.5.1, 3.5.2

Martynova, Natalya, Ratnovski, Lev, and Vlahu, Razvan, 2014, *Franchise Value and Risk-Taking in Modern Banks*, De Nederlandsche Bank Working Paper No. 430.

Martynova, Natalya, 2013, *Internal Asset Transfers and Risk Taking in Financial Conglomerates*, Working paper.

### **Session 5: Managing bank risks.**

*Credit scoring, probability of default (PD), and the loss given default (LGD) • The Merton (1974) model • Liquidity management • Interest rate risk • Market risk: notions of portfolio management*

**FR**, Chapters 8.1 through 8.4.

## **Session 6: Systemic risk, regulation, and regulatory arbitrage.**

*Definition, interpretations, and measurement of systemic risk • Interbank default contagion • Systemic risk as capital shortfall • The Volcker rule in the United States • The Basel accords • Regulatory arbitrage & regulatory forbearance*

**FR**, Chapter 7.7; **DT** Chapters 2.2 and 3;

Rochet, Jean-Charles, and Jean Tirole, 1996, *Interbank lending and systemic risk*, *Journal of Money, Credit and Banking* 28, 733–762;

Farhi, Emmanuel, and Jean Tirole, 2012, *Collective Moral Hazard, Maturity Mismatch, and Systemic Bailouts*, *American Economic Review*, 102, 60–93;

Acharya, Viral V., Lasse H. Pedersen, Thomas Phillippon, and Matthew Richardson, 2011, *Measuring systemic risk*, *Working paper*;

Górnicka, Lucyna A., 2015, *Big Banks, Big Shadow Banks? A New Model of Regulatory Arbitrage*, Tinbergen Institute Discussion Paper 14-035/VI/DSF74;

Thakor, Anjan, V., 2012, *The Economic Consequences of the Volcker Rule*, Center for Capital Markets Competitiveness;

NYU Volatility Lab: <http://vlab.stern.nyu.edu/en/>.

## **Session 7: The European Banking Union. Benefits and Challenges.**

*Lender of last resort • The European banking union*

Farhi, Emmanuel, and Jean Tirole, 2014, *Deadly Embrace: Sovereign and Financial Balance Sheets Doom Loops*, MIT Working paper;

Zoican, Marius Andrei, and Lucyna A. Górnicka, 2015, *Too-International-to-Fail? Supranational Bank Resolution and Market Discipline*, Tinbergen Institute Discussion Paper 13-184/VI;

Colliard, Jean E., 2014, *Monitoring the Supervisors: Optimal Regulatory Architecture in a Banking Union*, HEC Paris Working paper