

Banking and Financial Intermediation

FINA 4503

Professor Deniz Okat

Fall 2017

Lecture notes 1

General information about the course

In a healthy economy it is important that funds easily move from investors who have money to entrepreneurs who have investment ideas.

A financial intermediary acts as a middleman between lenders (investors or depositors) and borrowers (entrepreneurs or credit customers).

Course information

There are different types of financial intermediaries:

- Banks
- Mutual funds
- Hedge funds
- Pension funds etc

Our course is about banks.

There are also different types of banks:

- Commercial banks
- Investment banks
- Blood banks etc

Our course is about commercial banks.

What type of activities does a bank do?

- During the course, we will answer these questions:
 - Why do banks exist? Why lenders do not directly lend to borrowers? How do banks create value for the society?
 - What are the problems banks face while lending? How do they solve those problems?
 - Why do we regulate banks? What type of regulative tools do we use in banking?
 - How do banks compete? Is bank competition good for the economy?
 - Why and how are banks connected? What are the consequences of such connections?
 - What is a financial crisis? What are the reasons of a financial crisis?
- To answer above questions we need to be equipped with some mathematical tools.

Course information

- To sharpen your math skills we will spend the first two weeks reviewing game theory. You don't need to have any math background to follow this part. At the end of this module, you should be able to
 - setup the problem, once I describe the environment,
 - solve basic maximization problems,
 - understand and interpret the "equilibrium".
- I will not ask you to memorize any particular definition or reproduce a list of items. But you should be able to relate concepts we cover to various problems in banking.

Course information

- Assignments and exams are based on lecture notes. There will be three exercise sets (25% total), one midterm (25%), one final exam (50%).
- The first exercise set will be on the "review" part of the course. The second exercise set will be similar to the midterm questions. Likewise, the third exercise set will be a good practice for the final exam.
- By email you can fix an appointment with me and ask questions. You can also drop by without appointment.
- All administrative questions should be directed to Ms. Katy CHOI.
- There will not be a makeup exam for the midterm. If you have a medical report, we will shift midterm's weight to final exam.

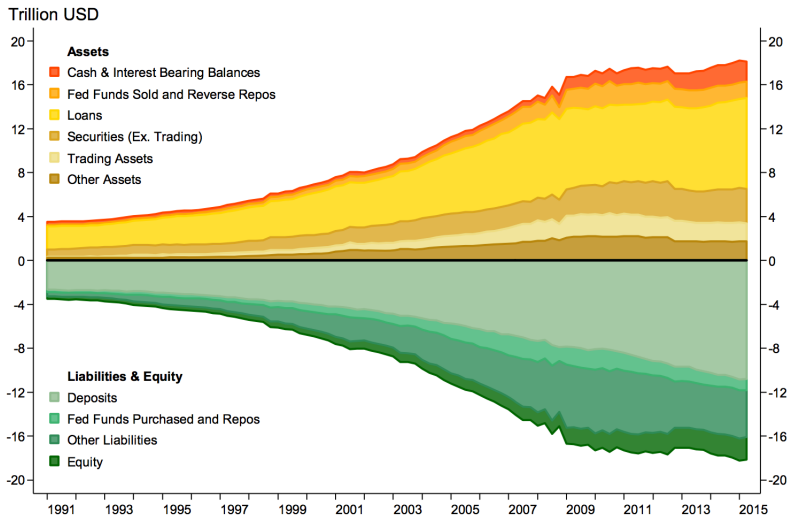
Why to study banks?

- Banks are important. They constitute an important part of the economy.
- Some numbers from the US:
 - Annual federal budget is \$4 trillion.
 - GDP is \$18 trillion.
 - Total market cap is \$25 trillion.
 - Total assets of banks is \$16 trillion.
- Banks are important not only because their assets are big, but also because of their influence on other industries.
- Banks are not neutral institutions in the economy. They do not simply act as intermediaries of funds. Their decisions have effects on real economy.

Some numbers in billions USD, 2015

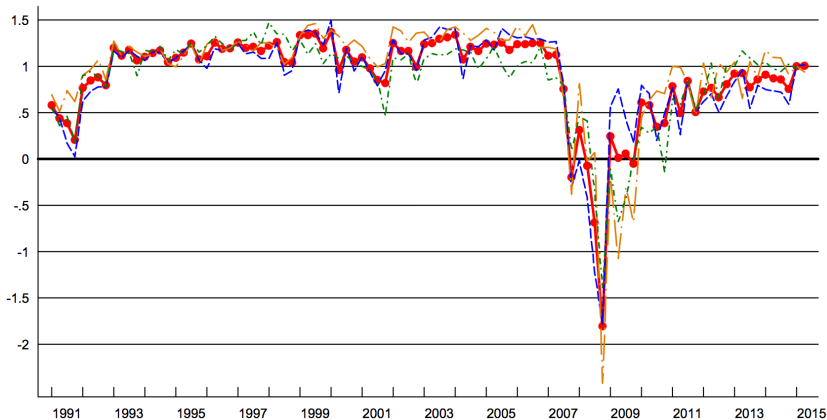
ASSETS		LIABILITIES	
Cash	2,253	Deposits	11,409
Securities	3,329	Borrowings	1,980
Loans	9,136	Other	867
Real estate loans	4,116	Equity	1,788
Commercial loans	2,099		
Consumer loans	1,358		
Other loans	1,563		
Interbank	60		
Other	1,266		
TOTAL	16,044		16,044

Some numbers



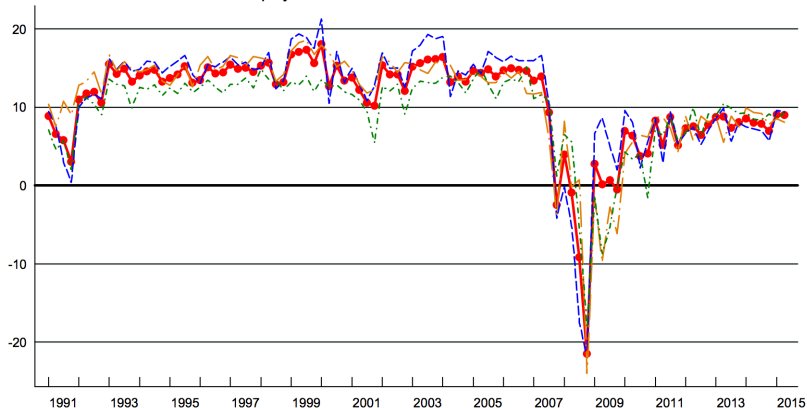
Some numbers

Annualized net income as % of total assets



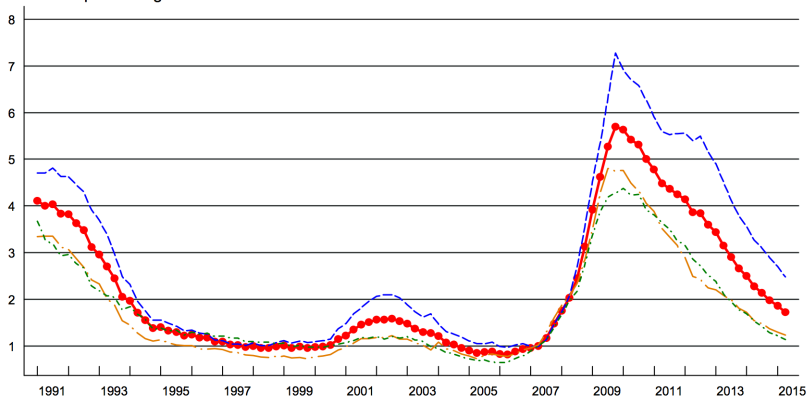
Some numbers

Annualized net income as % of equity



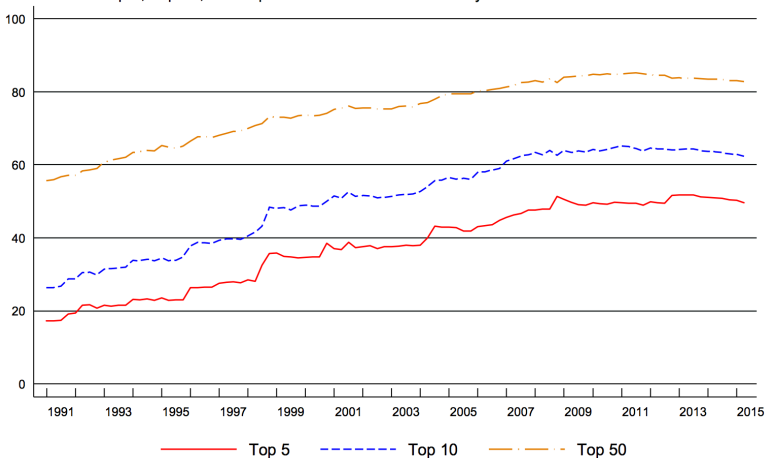
Some numbers

Total non-performing loans as % of total loans



Some numbers

Assets of the Top 5, Top 10, and Top 50 firms as % of total industry assets



Some numbers

Bank of China, balance sheet 2015, (*in RMB millions*):

Total assets		16,815,597
Loans, gross		9,135,860
Allowance for loan impairment losses		(200,665)
Investments	2	3,595,095
Total liabilities		15,457,992
Due to customers		11,729,171
Capital and reserves attributable to equity holders of the Bank		1,304,946
Share capital		294,388

Some numbers

Bank of China, income statement 2015, (*in RMB millions*):

Net interest income		328,650
Non-interest income	1	145,262
Operating income		473,912
Operating expenses		(185,401)
Impairment losses on assets		(59,274)
Operating profit		229,237
Profit before income tax		231,571
Profit for the year		179,417
Profit attributable to equity holders of the Bank		170,845

Organization of a bank

An example

