ECON4335 The economics of banking

Lecture 1: Introduction 19/1 2010

This lecture

A. Some practical information
B. Some basic concepts and facts
C. Some indication of what is to come

Practical information

- New course, prepare for trouble
- No compendium, download articles
- No old exams, no old seminar questions
- Exam in two parts:
  - Highly structured model related questions, interpretation, derivation
  - Open question where formal derivations are not expected
- Excursion to Norges Bank and Finanstilsynet?
- Start reading early, may begin on financial crises

This lecture

1. What is a bank? What do banks do?
2. The role of banks in the financial system
3. Banks versus securities markets
4. Money, liquidity and the relation between banks and central banks

Allen and Santomero's article

Freixas and Rochet, ch 1

WHAT IS A BANK?

Legal definition

- Institution that takes deposits from the general public

- ”… foretak som skaffer seg midler til sin virksomhet ved å ta mot innskudd fra en ubestemt krets av innskytere.” *Lov om forretningsbanker* §1

Banks defined by core activities

- Taking deposits
- Making loans
- Providing payment services

- Deposits are short-term, often on demand
- Loans are more long-term
- Need to keep liquid reserves

Bank behavior: Lectures 4 and 5 (Vislie)

Balance sheet. Norwegian banks 2008.

Percent of total assets, branches of foreign banks not included.

Assets			Liabilities and equity	
Cash and deposits	11.6		Deposits from	
Securities (current)	11.6		- customers	38.5
Loans to non-financials	59.4		- domestic financials	4.5
Other lending	11.3		- foreign financials	12.9
Loan loss provisions	-0.3		Norges Bank	1.8
Fixed assets and others	6.4		Other deposits / loans	4.5
			Certificates	5.4
			Bond debt	19.0
			Other liabilities	5.5
			Subordinated loans	2.5
			Equity	5.4
Total assets	100		Total	100

Source: Norges Bank Financial Stability Report 2 2009, Appendix Table 6

Risk management

Credit risk, liquidity risk, interest rate risk, counterparty risk, exchange rate risk,….

- *Low equity capital relative to liabilities*
- *Low liquid reserves relative to deposits*

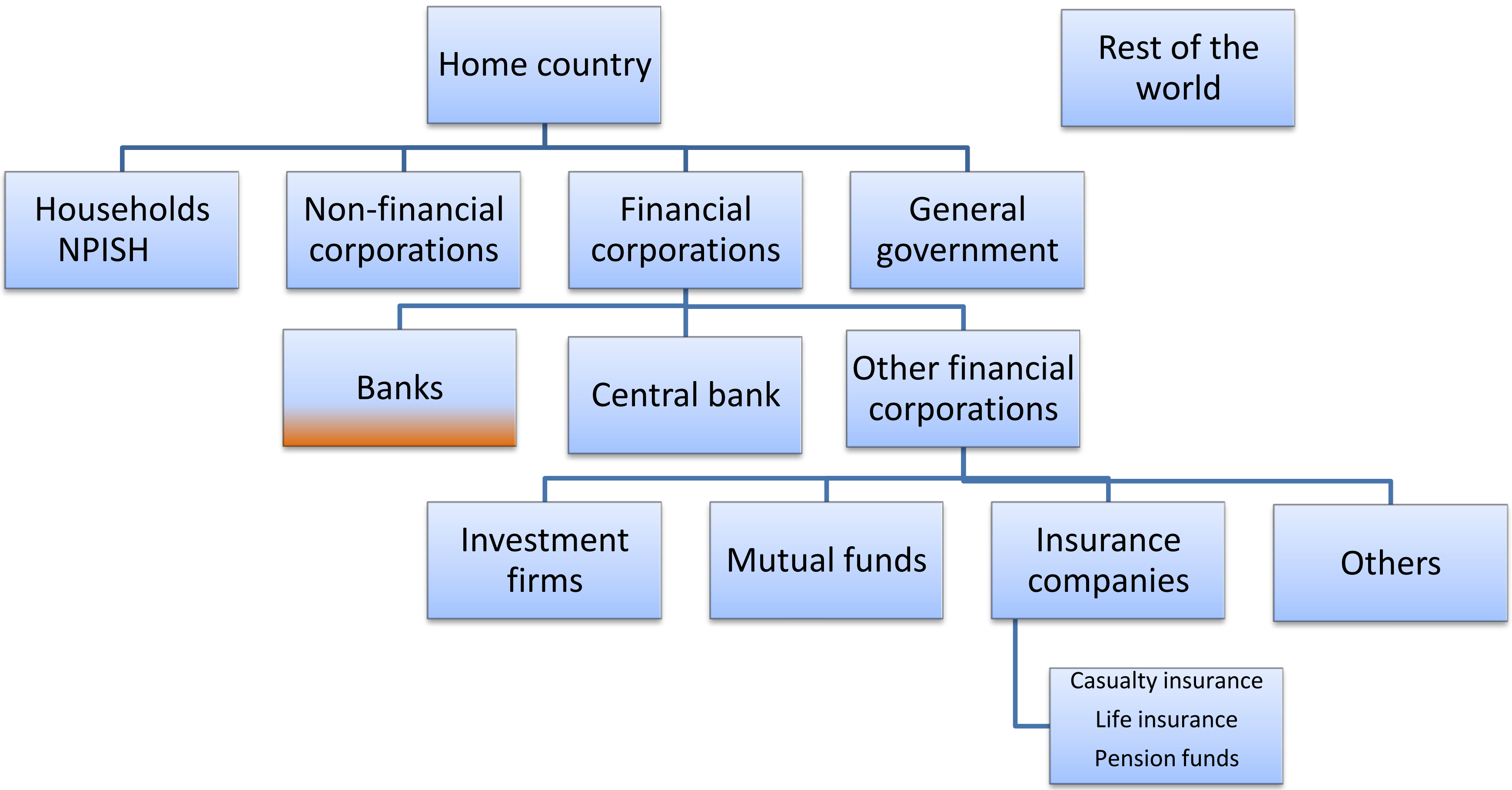
Risk management: Lectures 12 and 13 (Vale/Rødseth)

Bank regulation: Lectures 9-11 (Vale)

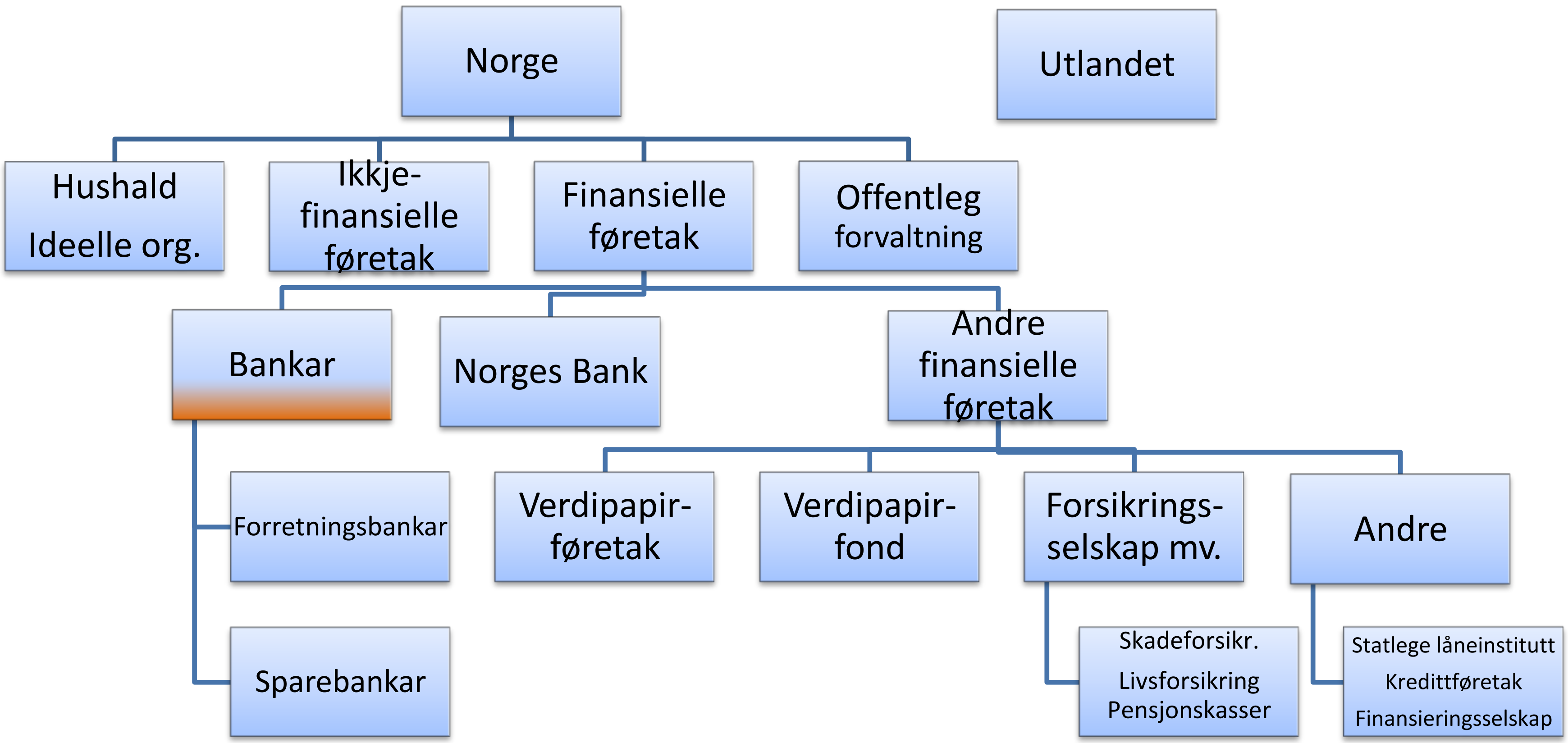
THE ROLE OF BANKS IN THE FINANCIAL SYSTEM

Institutional sectors

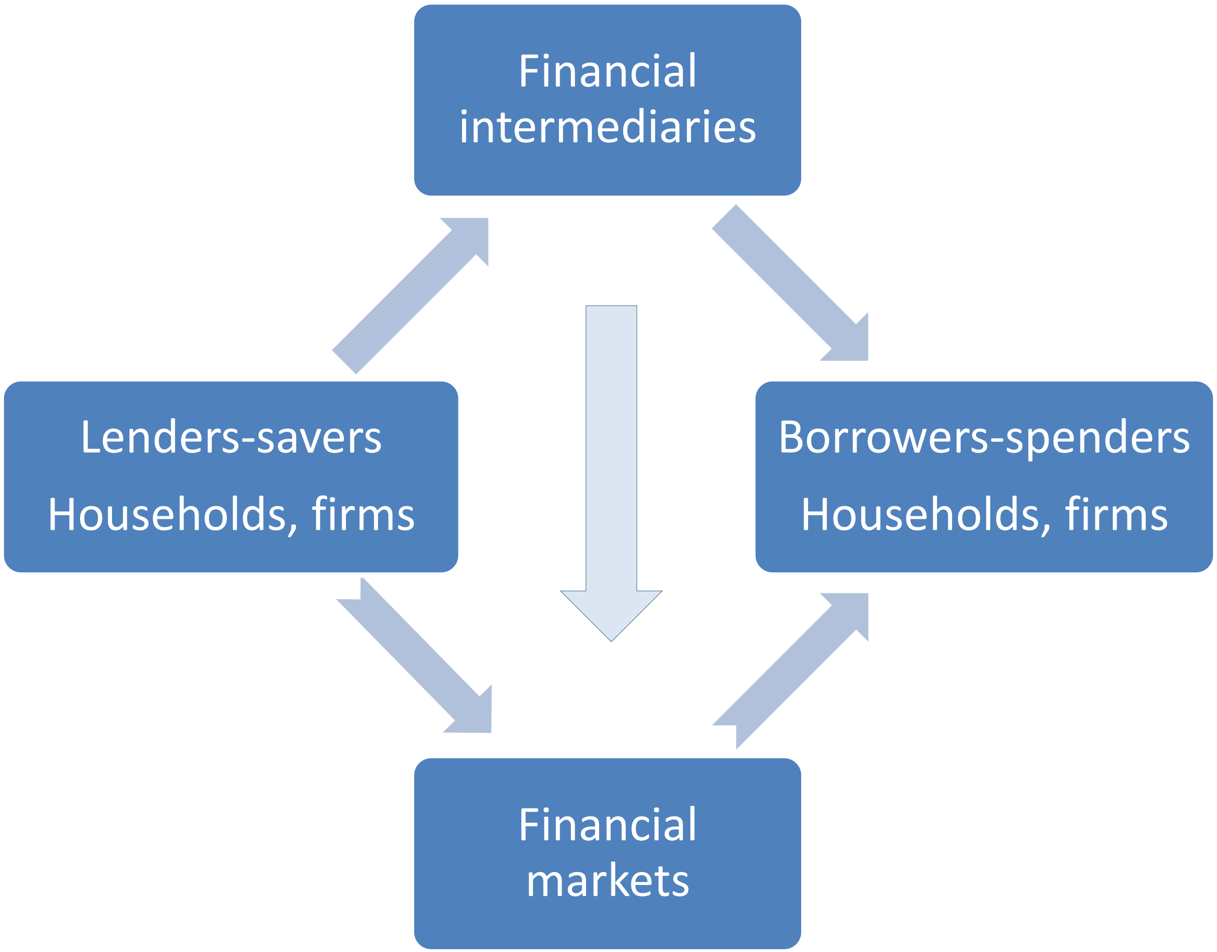
Classification by legal status



Institusjonelle sektorar



Direct versus indirect finance



Financial intermediary

Financial firms that borrow funds from savers or from other financial firms and invest them in loans or securities

Mainly investing in loans:

- Banks
- Finance companies
- Credit companies
- Government lenders

Mainly investing in securities:

- Investment firms
- Pension funds
- Insurance companies
- Mutual funds

Reasons for intermediation

- Economies of scale and scope
  - Transaction costs
  - Costs of information gathering
- Repackaging, diversification
- Monitoring services

Dealing with adverse selection and moral hazard problems

Lectures 2 and 3 Vislie

Freixas and Rochet: Ch. 1.7 Banking in the Arrow-Debreu model:

With full information, complete markets and no transaction costs there is no role for banks

What makes banks different from other intermediaries?

- Maturity transformation
  - Borrowing short, lending long
  - Danger of bank runs
- Dominating role in payments system
- Often where households and non-financial firms hold most of their *liquid* assets

Main reasons for

- Bank regulation and supervision
- Deposit insurance
- Bank rescues

Lectures 9 – 11 (Vale)

What makes banks different from other intermediaries?

- Bank deposits major part of money supply
- Crucial in the transmission of monetary policy to the real economy
- Crucial for the financing of small and medium sized firms
  - Information contained in the customer relationship

Banks and the macro-economy: Lectures 6-8 + extra lecture (Rødseth)

Investment banking versus deposit banking

- Investment banks
  - Prepare and underwrite issues of securities
  - Hold securities on their own account
  - Are brokers and dealers in securities
  - Do not take deposits
- Are not banks, but a subspecies of investment firms
- Universal bank = Bank and investment bank in one firm
- Financial conglomerate

Different countries require different degrees of separation between deposit banking and other activities

“Shadow banking”

Avoiding the costs of regulation

Example:

- US Money Market Funds
- Securitization
- Hedge funds

BANKS VERSUS SECURITIES MARKETS

Financial assets and liabilities of Norwegian households

Assets	1995	2008
Currency and deposits	40	34
Bonds and certificates	1	1
Equity	13	13
Insurance reserves	36	36
Other financial assets	11	16
Total financial assets	100	100
Liabilities		
Loans from banks	53	61
Loans from government lenders	19	8
Loans from others	17	22
Other liabilities	11	9
Total liabilities	100	100

Source: Statistics Norway, Financial Accounts

Some observations on Norwegian households

- Bank deposits dominates the liquid part of the portfolio
- The share of bank deposits has declined moderately since 1995
- Bank loans is the major liability
- Securitization of housing loans, new rules in 2007

Distribution of household's financial assets
(latest available year and including NPISH)

Assets	Norway	Germany	Japan	USA
Currency and deposits	34	36	49	15
Securities other than shares	1	7	4	9
Loans	3	0	0	2
Shares and other equity	13	25	18	44
Insurance technical reserves	36	31	25	30
Other accounts receivable	13	1	3	0
Total assets	100	100	100	100

Source: OECD.stat : financial accounts

Financing of Norwegian non-financial corporations. Per cent

Instrument	Gross		Consolidated	
	1995	2008	1995	2008
Bonds and certificates	5	5	7	6
Loans	38	45	38	45
from banks	11	15	16	22
from other financials	4	3	6	5
from other non-financials	13	14	0	0
from abroad	7	11	11	16
Other debts	24	16	15	13
Equity	33	34	40	36
Total	100	100	100	100

Source: Statistics Norway

Some observations on Norwegian non-financials

- Debt is more important than equity
- Debt financing is from many sources
- Bank financing is particularly important for small firms
- If anything bank loans have become more important over time

Financing of non-financial corporations
(latest year available, non-consolidated figures)

Liability	Norway	Germany	Japan	USA
Securities other than shares	5	3	5	11
Loans	45	32	26	20
Shares and other equity	35	51	52	54
Insurance technical reserves	0	5	0	0
Other accounts payable	15	10	16	15
Total liability	100	100	100	100

Source: OECD.stat , Financial accounts

Direct versus indirect financing: International differences

- Households in US and UK invest more in market, less in bank deposits than households in Japan, Germany and France
- Firms in US and UK use the bond market more than firms in Europe and Japan
- Trend towards less reliance on banks and more on securities markets
- Households bear more risk in US and UK (or do they?)

Allen and Santomero (2001)

Allen and Santomero's explanation

- Banks in Japan, Germany and France face less competition from securities markets
- They are able to run large surpluses in good times which they can draw on in bad times
- Consumers get shielded from variations in return through this intertemporal smoothing
- In US and UK this is not possible because consumers quickly leave the banks for alternatives

Why is competition from securities markets stronger in US and UK?

Other explanations

- Banks have been more regulated and less efficient in US?
- Regulators have allowed a parallel banking system to grow in US
  - Money market funds, Credit card companies, Securitization

What is best for the economy, more bank financing or more equity financing?

US versus Germany

- Can a higher share of debt improve the performance of managers?
- Are banks better than shareholders at monitoring the performance of management?
- Corporate governance

Econ 4245 Economics of the Firm

MONEY, LIQUIDITY AND THE RELATION BETWEEN BANKS AND CENTRAL BANKS

Money

Money = Commonly accepted means of payment

- Currency (Coins and notes)
- Bank deposits
- (Unused credit lines on credit cards and transaction accounts)

Bank deposits constitute the bulk of the money stock in all modern economies

Liquidity

The speed and ease with which an asset can be turned into money (commonly accepted means of payments)

- low transaction cost, little price uncertainty

- Money is 100 per cent liquid
- A government bond is less liquid
- A bank loan is even less liquid

M0, M1, M2,…

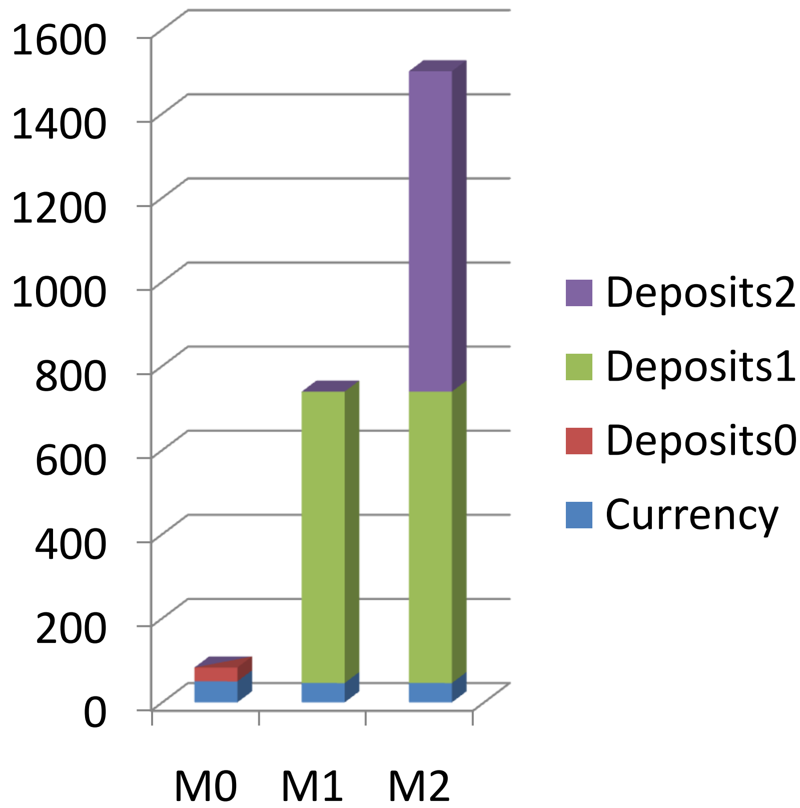
M0 = Notes and coins + Deposits at central bank

M1 = Notes and coins outside banks + Deposits on transaction accounts in banks

M2 = M1 + Deposits on savings accounts

M3 = M2 + ?

Money supply in Norway Nov 2009. Bn NOK



Currency in banks	7
Currency outside banks	43
Deposits0 in Norges Bank	33
Deposits1 on transaction accounts	693
Deposits2 on other accounts etc	762

What do central banks do?

1. Issue currency (coins and notes)
2. Bank for the banks (central banking proper)
3. (Bank for the government)

A. Monetary stability (macro stability)
B. Financial stability
C. (Low cost, high return for government)

Central banking proper

- Taking deposits from banks
- Lending to banks (usually against collateral)
- Settling transactions between banks

Transactions between banks in NOK are settled by moving money between their folio accounts in Norges Bank

Financial assets and liabilities of banks 31/12 2008

Including Norwegian branches of foreign banks

Instruments	Assets bn NOK	Liabilities bn NOK
Currency	6	
Deposits / Loans in Norges Bank	101	136
Deposits in other banks	461	
Deposits from Norwegian customers		1 464
Deposits from Norwegian banks		51
Deposits from abroad		822
Loans	2 629	138
Bonds and certificates	338	836
Other claims / debt	255	213
Shares etc	51	88
Total	3 842	3 750

Source: Statistics Norway, Financial accounts

Fractional reserve banking – the traditional view

(1) D = L + MB

Deposits, D, are either lent, L, or held as central bank money, MB

(2) MB = a D

Banks hold a constant fraction a of deposits in reserve

(3) M0 = C + MB

M0 is equal to currency in circulation outside banks, C, plus bank reserves

M0 determined by central bank, C constant

Fractional reserve banking - result

(4) $D = (1/a)\ (M0 - C)$

(5) $L = [(1-a)/a]\ (M0 - C)$

The volume of deposits and loans is determined by

- The central bank through M0
- The banks through their choice of a
- The general public through their choice of C

A change in a leads to a equal changes in D and L

Does the tail wag the dog?

Objections raised against the traditional view:

- Central banks have to supply the amount of money that the banking system requires, or the payment system will break down.
- For banks to lend, there must be demand for loans
- More than one currency complicates things