The Financial Sector: Money and Banking

Chapter 15

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Learning Outcomes

In this chapter we will:

1. examine the main factors affecting the demand for and supply of cash and credit funds in the money market
2. explain how commercial banks create credit and outline the consequences for an economy
3. analyse the factors that influence the level of interest rates, evaluating the impact of changes in interest rates on economic activity
4. examine the role and effectiveness of current financial institutions and regulators in the operation of financial markets

Functions of Money

Functions of Money

- Medium of Exchange: Money allows people to buy goods and services or allows exchange between buyers and sellers. Also money allows the buying and selling of goods and services to be broken into two distinct activities. This means that no barter is required.
- Measure of Value: Money enables a price to be put on goods & services.
- Store of Wealth: Money allows people to save for the future in order to make purchases in the future. Money: is anything that is generally accepted by the majority of people in exchange for goods and services

Can You Name these Currencies from Logos?

Characteristics

The Characteristics of Good Money

1. Recognisable: Money should be easily recognisable as genuine and be difficult to counterfeit. If some people have doubts about the authenticity of the item being used as money, they will not accept it. Once it is not generally accepted, it is no longer money.
2. Portable: Whatever is being used as money must easily be carried in large quantities.
3. Durable: Euro notes and coins can survive wear and tear. E.g. being washed in the washing machine. This is a practical aspect of modern money in order to cut down on the cost of replacing it.
4. Divisible: A euro coin can be broken down into 50c, 20c, 10c, 5c, 2c 1c pieces. This is to facilitate giving change.
5. Scarce: Money must be scarce in relation to the demand for it. This is to ensure that money maintains its value. An increase in the money supply causes inflation which is a reduction in the value of money.

Money Under the Gold Standard

1800s £1 Sovereign (0.2354oz gold)

US gold certificate

By **gold standard**, money was backed by gold – each currency unit was a fixed amount of gold. People could exchange paper money for gold on demand. States & banks could only issue money if they held enough gold. Money supply was limited by gold reserves, restricting economic growth and credit creation.

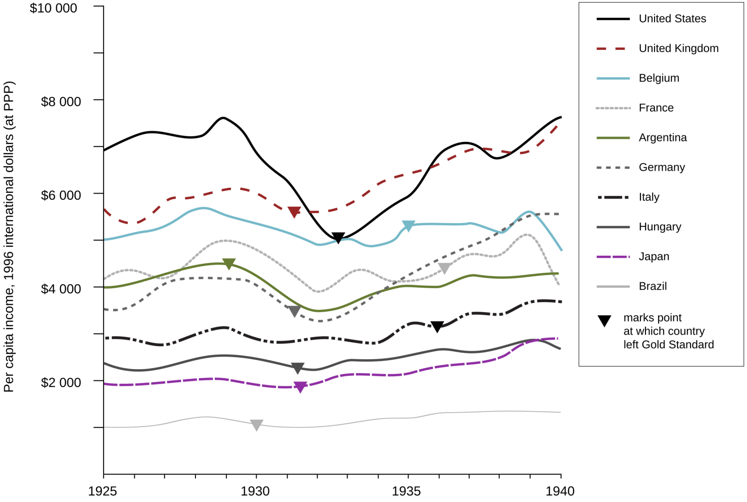
Carrying gold was inconvenient and unsafe, so banks issued **paper receipts** (ie banknotes) representing gold deposits. These notes were **token money** and public trusted that notes could be converted to gold.

Important development

Banks knew not everyone redeemed gold at same time, so they could issue more notes than gold held. Over time, we moved from gold convertibility to **fiat money**. Fiat money has value because:

- The gov't declares it legal tender – modern money is no longer backed by gold.
- The public has confidence in it.

Ending the gold standard & economic recovery during the Great Depression



What Is Fractional Reserve Banking?

Commercial banks are required to keep only a **fraction** of deposits as reserves. These reserves are held as cash or deposits with the central bank (liquid assets on hand). The remaining funds can be lent out.

Step 1

A customer deposits **€1,000** into Bank A, assuming the reserve ratio of **10%**. Bank A must keep:

- €100 as reserves
- €900 can be lent out

The original €1,000 still exists in the customer's account.

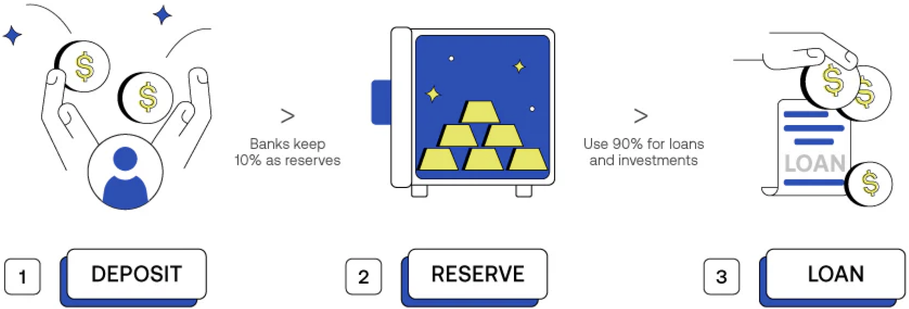
Step 2

The €900 loan is spent and deposited into Bank B. Bank B keeps 10% (€90) as reserves. Bank B lends out €810. Deposits in the banking system now exceed the original €1,000.

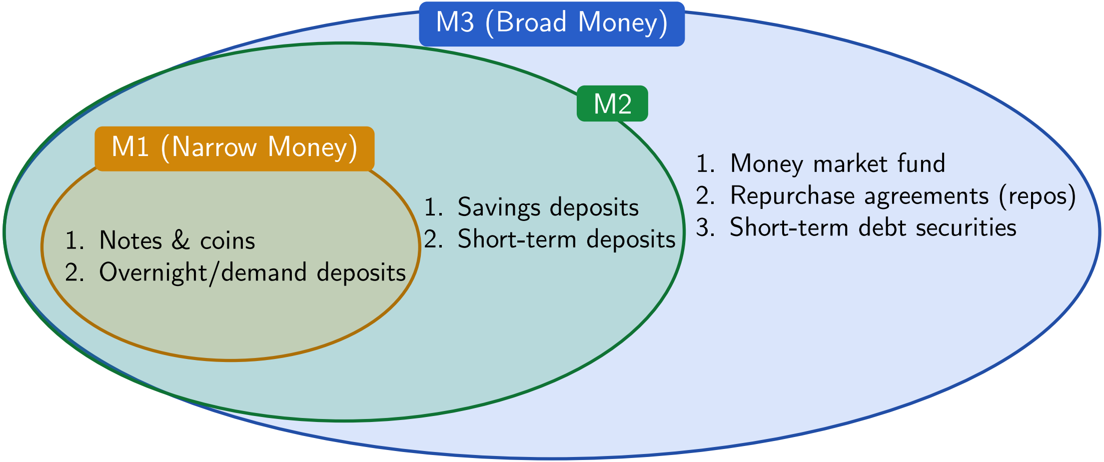
Step 3

The process continues across the banking system. Each bank keeps a fraction of capital as liquid reserves, lending out the rest. This creates **new credit** and **new bank deposits**.
Key idea: Banks do not create physical cash. They create **deposit money**.

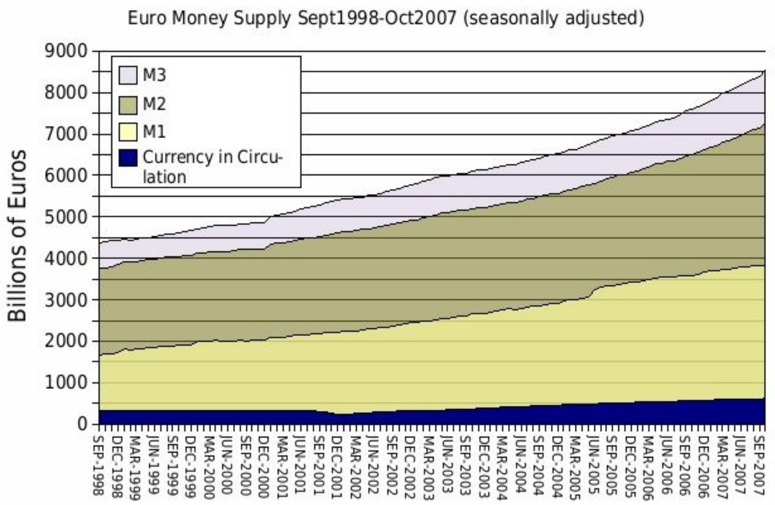
Mechanics of Fractional Reserve Banking



Types of Money Supply in a Fiat System



Eurozone Money Supply 1998-2007



Limits on Ability of Banks to 'Create' Credit

1. Consumers' Demand for Cash: if more bank customers demand liquid cash upfront, that bank's pool of loanable capital becomes smaller. Conversely, if customers are happy to let cash sit in their account for longer, the pool of loanable funds is greater.
2. Reserve Requirement Ratio: the higher the reserve ratio imposed on lenders, the stronger the limits on supply of credit.

Lets use AIB as an example

In Dec the bank had retail deposits of €109.9bn. Say reserve ratio was 5%. Then the bank would have to hold 109.9bn $\times$ 0.05 $=$ 5.495 bn in liquid cash, leaving a remaining 104.405bn available for lending. If the reserve requirement was instead 10%, the bank would need to hold 109.9bn $\times$ 0.10 $=$ 10.99bn on hand, with only 98.91bn to lend.

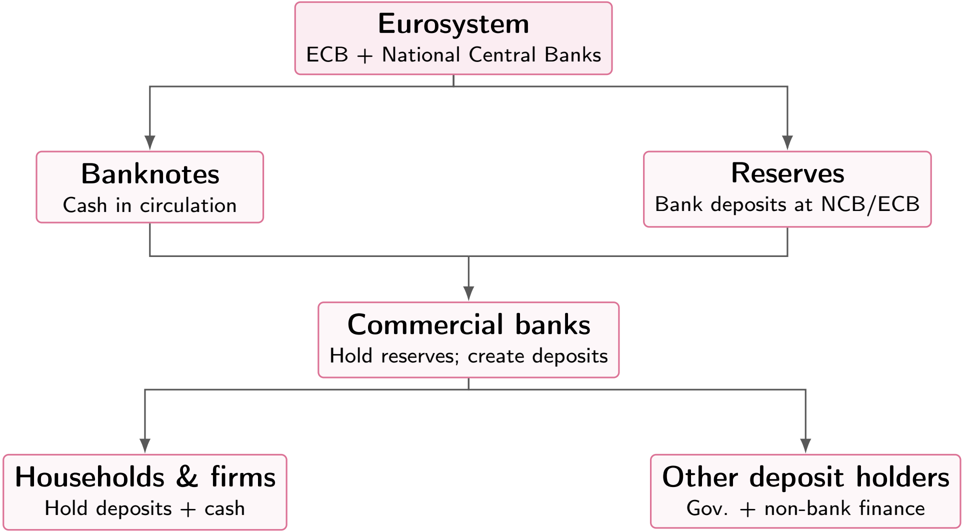
3. Availability of Creditworthy Clients: a prudent bank will only lend to those with the ability to repay (to avoid losses from defaults). If there's a lack of ability to repay – like after the 2008 financial crisis – credit supply will be constrained.
4. Appetite for Borrowing Among Businesses: banks can only create credit if there's sufficient demand from individuals and businesses.

Factors Influencing Demand for Credit

1. Cost of borrowing: the more expensive it is to borrow money (eg higher interest rates, overdraft fees, etc) the lower the demand for credit. This is simply the law of demand in effect.
2. State of the Economy: if the economy is growing, businesses and governments are more likely to demand credit to avail of the opportunities afforded by economic growth. On the contrary, as the economy contracts, less stuff is being produced so less credit is needed to pay for this reduced production.
3. The Degree of Financial Regulation: stricter rules around borrowing will limit one's ability to demand credit. For first-time buyers looking to buy a house in Ireland:
   - can only borrow a max of 4 times their gross annual income
   - must put down an initial deposit of 10% of the value of the mortgage

   These rules were brought in after the 2008 financial crisis to prevent loans being issued to those without the ability to repay them.

Money Supply Distribution in the Eurosystem (Hierarchy)



Why Do We Pay Interest on Borrowings?

The question in this slide's title may seem a little silly, but understanding the theory of interest rates is critical in banking and finance.
Paying interest on debt (ie the price of capital) is associated with the time value of money. Having €1 today is more valuable than having €1 in a year's time, because I can grow today's €1 (by depositing it in a savings account/buying shares/buying Bitcoin/etc). Thus in a year's time it will be worth more than €1.
In order to encourage an investor to lend the money to you – rather than grow it by investing it in something else – you need to pay them a little extra for their trouble. This is how the interest rate applies a price to the time value of money.

Money Supply & Interest Rates in The Eurozone

Open Market Operations

This involves the purchase (or sale) of bonds by the ECB from commercial banks with the aim of reducing (or increasing) money supply in the eurozone area. Some of the tools used for this purpose include:

1. Main Refinancing Rate: this is the rate a commercial bank can borrow from the ECB for one week.
2. Longer Term Refinancing Rate: this is the rate a commercial bank can borrow from the ECB for a longer period, typically three months.

Standing Facilities

These facilities allow commercial banks to borrow or deposit overnight funds with the central bank, managing their liquidity and setting the floor and ceiling for overnight interest rates in the Eurozone, signalling monetary policy.

1. The Marginal Lending Facility allows eligible banks to borrow overnight funds from the national central banks against eligible collateral. It helps banks quickly cover unexpected liquidity shortfalls.
2. Deposit Facility allows banks to make overnight deposits with the central bank, absorbing excess liquidity from the banking system.

Eurozone Interest Rates Over Time

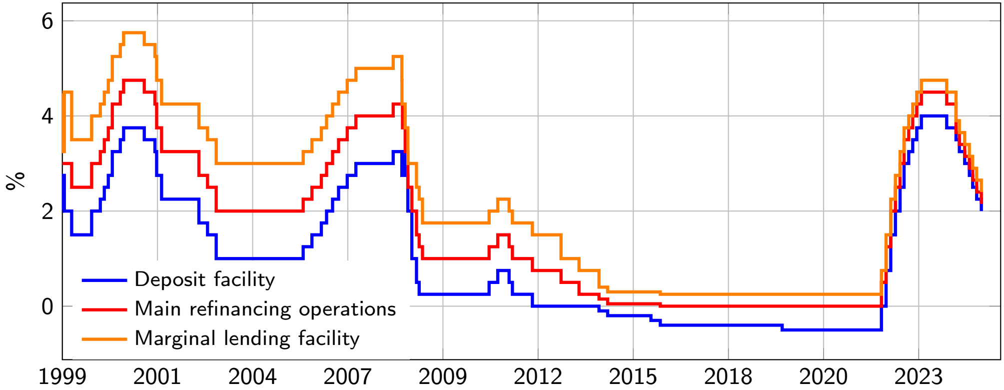


Figure: ECB Rates Headline Rates over Time

Effects of Reduction in Interest Rates

1. Borrowing is Encouraged: borrowing is now cheaper, resulting in lower loan repayments. Lower loan repayments mean increased spending power. This lead to greater spending which leads to higher inflation. Increased inflation leads to higher imports, which leads to higher living standard.
2. Saving is Discouraged: With lower rate of returns, people may find it less attractive to save, which again leads to higher spending.
3. Reduced Mortgage Repayments: The cost of monthly repayments decreases resulting in a higher standard of living. This can also lead to a rise in house prices.
4. Cost of Servicing the National Debt: With lower domestic interest rates, the cost of repaying the euro-zone portion of the national debt falls.
5. Reduced Costs of Production: Costs of production will fall resulting in lower prices and/or an increase in the numbers employed.
6. Incentive to Invest: The Marginal Efficiency of Capital (MEC) will rise, leading to higher profits, usually causing an increase in investment. This is because, it becomes cheaper for businesses to borrow and so businesses may invest.
7. Economic Growth is Encouraged: With possibly higher investment, future economic growth in Ireland may be increased.
8. Revenue Received from DIRT: With less savings the government may receive less revenue in DIRT
9. Shift in Emphasis in Government Policy: With lower interest rates, the government could shim its emphasis from tax revenues more towards borrowing, as it is now cheaper for the gov't to borrow.

Effects of Increases in Interest Rates

1. Borrowing Discouraged: Borrowing is more expensive resulting in higher loan repayments, which will reduce spending power, resulting in a lower standard of living.
2. Savings Encouraged: With a higher rate of return people may find it more attractive to save, and so they will reduce their spending.
3. Increased Mortgage Repayments: The cost of monthly repayments increases, resulting in reduced disposable income and a lower standard of living.
4. Increased Cost of Servicing the National Debt: With higher domesAc interest rates the cost of repaying the internal portion of the national debt rises.
5. Higher Costs of Production: Cost of production will increase resulting in higher domestic prices. This will reduce the competitiveness of Irish exports and may lead to reduction in sales.
6. Disincentive to Invest: The MEC will fall resulting in lower profits and this may discourage investors / it becomes more expensive for businesses to borrow and so they may not invest.
7. Economic Growth is Hindered: With possible lower investment, future economic growth in Ireland may be damaged.
8. Taxation Revenue Effects: With additional savings the government may receive additional revenue through DIRT. However, with lower spending the revenue from VAT and excise duties may fall. If unemployment increases there will be a reduction in income tax revenue.
9. Increases in Unemployment: Lower consumer spending, falling demand for Irish exports, a reduction in investment and a decline in economic growth may result in a rise in unemployment.

Types of Financial Institutions

Institution	Role
Credit Unions	Issue low cost loans
Building Societies	Specialise in mortgage lending
Retail & Commercial Banks	Provide various financial services
Insurance Companies	Protect businesses and individuals against adverse events
An Post	Offer savings accounts and insurance
NTMA	Manage National Debt
European Central Bank	
The World Bank	
The IMF	

Financial Regulation in the Eurozone

Following the 2008 financial crisis, many believe that if banks were properly regulated (regarding reserve ratios and the number of bonds they could issue to fund lending practices), such crises wouldn't occur.

However, others believe that bank regulation would remove the banks ability to fund investment projects and as such mean a lower standard of living for everyone in the economy.

Reasons for Imposing Financial Regulation.

1. Protect Consumers: Regulation will ensure that the interests of the banks' consumers are protected and that savers' deposits are secure.
2. Proper Lending Policies: Regulation will ensure that the banks follow correct lending procedures and that excessive / reckless lending is avoided.
3. Banking System Stability: Regulation will ensure that the banking system should remain stable.
4. Economic Stability or Confidence: Proper regulation may ensure that the banks operate efficiently resulting in public confidence in the banking system and allow for effective flow of credit.
5. Less Need for Government Intervention: If the banks are properly regulated then there will be less need for the government to become involved. Following the collapse of Anglo in 2008, the State poured billions into the bank to keep it solvent.

Moving to a Cashless Economy

Advantages to Consumers

- Convenient and safer: It is less time consuming for consumers to use electronic money e.g. contactless payments or online banking. Also, stolen cards can be cancelled but cash cannot
- Less expensive: It is less expensive for consumers to bank online instead of using cheques. No travel cost to/from the banks.
- International transactions: Online purchasing becomes easier & more cost-effective for consumers.

Disadvantages to Consumers

- Security risks/hacking: Consumers need to be vigilant in relation to online security as the risk of hacking poses a significant risk for consumers.
- Exploitation of vulnerable people: those less familiar with technology, like internet banking, may struggle to use this tech effectively and thus get left behind
- Posible overspending or impulse buying: The convenience of cashless payments means that consumers may be more inclined to engage in impulse buying or not keep track of spending.

Moving to a Cashless Economy

Advantages to Banks

- Reduced need for labour: Reduced costs for banks as they require less staff as many banking operations can be completed using technology.
- Greater efficiencies: Bank processes become more streamlined as there is less management of cash required and more automated processes can take place online.
- More profitable: Due to reduced costs of staff and the streamlining of service provision, the banking industry may become more profitable.

Disadvantages to Banks

- Technological issues: Banks become more vulnerable due to technology failures and connectivity issues. If the technology fails, transactions can't take place and the bank loses out on revenue.
- Set-up & maintenance costs: Banks must fund the installation and maintenance of the new technologies. If tech fails, repairs could prove costly.
- Human Resource/IR issues: If workers feel they are being replaced by technology, they may take industrial action (go on strike), harming business operations.