Yr 13 Economics

Theme 4: A global perspective

Section 4.4: The financial sector

4.4.1 Role of financial markets

- Awareness of the role of financial markets:
  - To facilitate saving
  - To lend to businesses and individuals
  - To facilitate the exchange of goods and services
  - To provide forward markets in currencies and commodities
  - To provide a market in equities

The specification:

- Theme 4 – A global perspective
  - The financial sector

Subject content	What students need to learn:
4.4.1 Role of financial markets	a) To facilitate saving b) To lend to businesses and individuals c) To facilitate the exchange of goods and services d) To provide forward markets in currencies and commodities e) To provide a market for equities

Borrowing and lending

When savers deposit their money in a bank, the money does not just sit there in the vault: the bank has to put that money to work to earn the interest paid to the saver

- Banks lend out depositors' money to borrowers, who pay interest (like rent) for the right to use the money
  - The interest rate "spread" is the difference between the interest rate the bank pays out to its depositors and the interest rate it receives from borrowers
    - The "spread" must always be positive overall – otherwise the bank would soon go bust. Money in must be greater than money out

Interest rate %	
Bank pays savers	4.30%
Bank charges borrowers	6.40%
Spread	2.10%

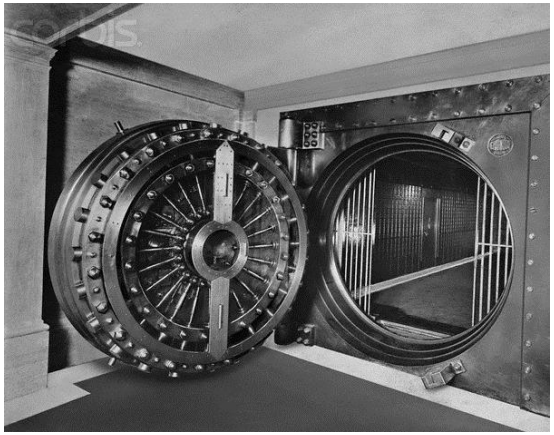
- Banks would make more money if they lent out 100% of the deposits. This would only be possible if...
  - If the amount borrowed matched exactly the amount deposited
  - If borrowers always repaid their loans just before the depositors were due to get their money back
  - If savers were not allowed to take their money back out of the bank whenever they wanted
  - If borrowers never defaulted on repaying their loans or paying the interest due

Product type	**From bank point of view**	**Explanation**
Savings	Liabilities	Money does not belong to bank: bank is liable for repaying to saver
Loans	Assets	Money belongs to bank: bank expects to be repaid by borrower

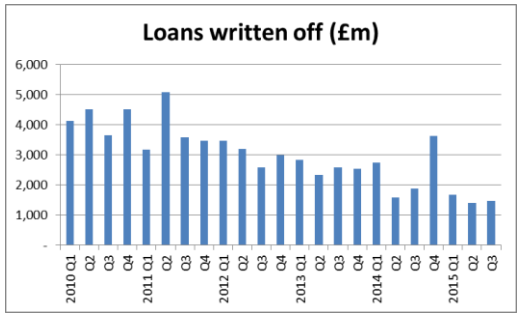
Matching assets and liabilities

Deposits are liabilities – things that are owed and must be paid back. Loans are assets. Banks must make sure they have sufficient assets to cover their liabilities

- This is a problem for banks. It is not possible to match their liabilities (deposits by savers) with their assets (loans out to borrowers) for the following reasons:
  - The amount borrowed DOES NOT match exactly the amount deposited
    - In economic downturns, people and businesses are too frightened to borrow money, and start saving "for a rainy day"
  - Borrowers DO NOT always repay their loans in time for the depositors to get their money back
    - Not all loans have a fixed date by which they must be repaid: overdrafts and credit card balances have no maturity dates



  - Savers are usually free to take their money back out of the bank whenever they want
    - Many savings accounts are "instant access"
  - Borrowers often fail to repay their loans or pay the interest due
    - According to the latest Bank of England data, in 2015 Q3, a total of £1.5bn in bad loans had to be written off by the banks



Solution: reserves and capital

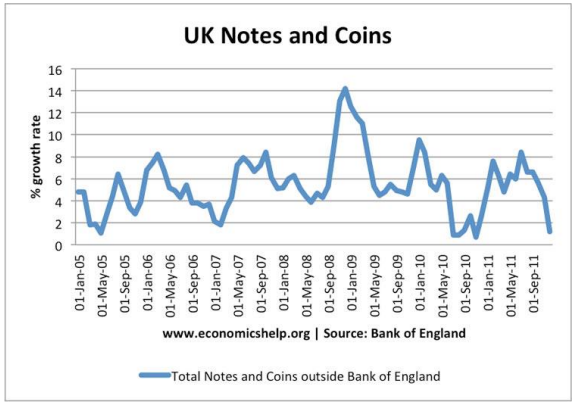
Banks must always ensure that they have sufficient cash to meet cash withdrawals demand of their depositors. There are two ways in which they do this

- The owners of the banks (usually shareholders) inject their own money into the bank to get it started and to provide a cushion against losses
  - This is known as the shareholders' capital
- The managers of the banks hold back in reserve a fraction of all savers' deposits to meet expected withdrawals
  - These are known as cash reserves
- It is very dangerous for a bank to have insufficient capital and reserves
  - If savers suspect that a bank is unable to pay out everybody on demand, they take fright and seek to withdraw their money all at once
    - This is called a "run on the bank". This happened to Northern Rock in 2007 – the first bank run in the UK for over 100 years

Fractional reserve banking

Banks discovered through trial and error that they only needed to keep back in reserve a small fraction of their deposits to meet daily cash withdrawals by savers

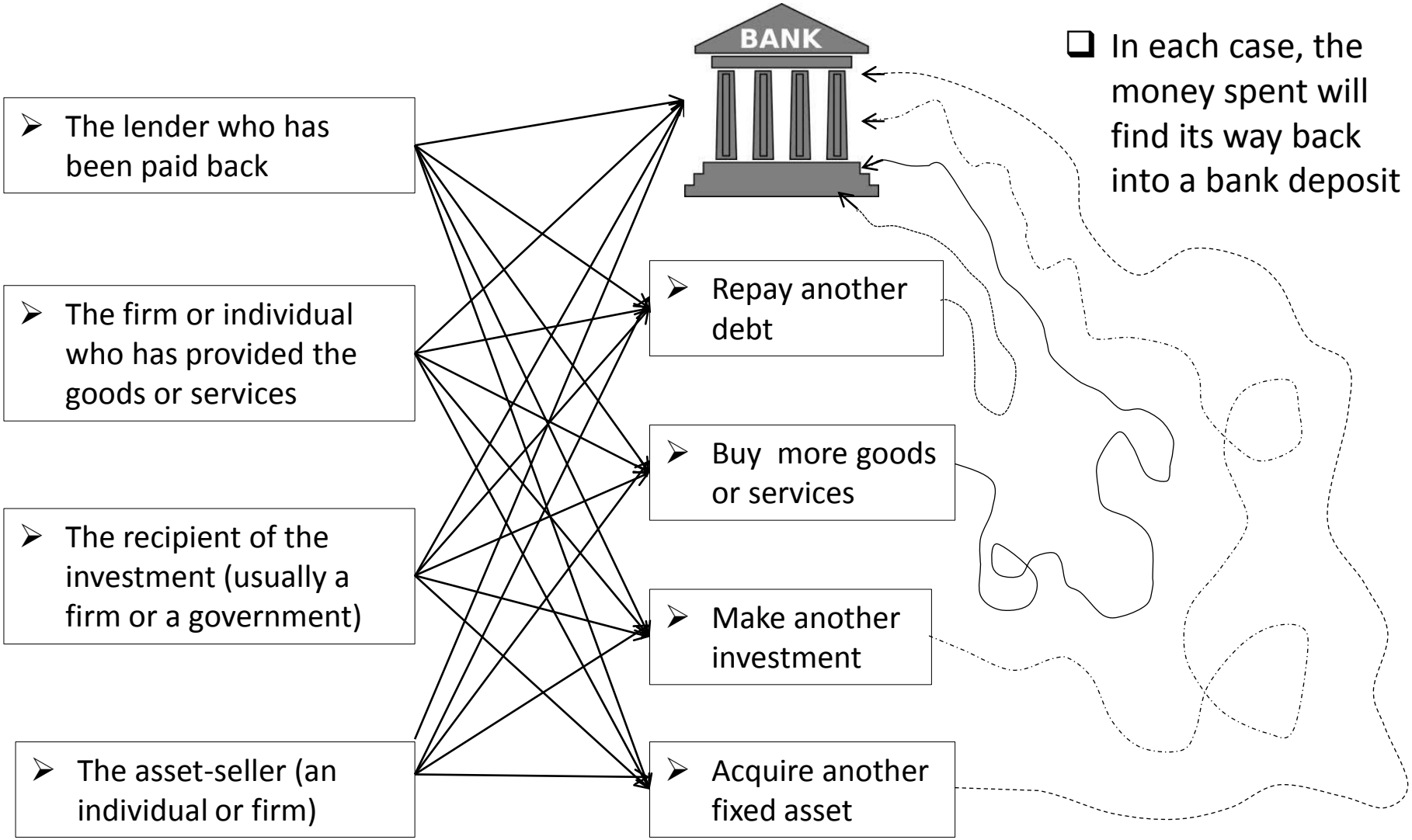
- Cash withdrawals as a percentage of total deposits will fluctuate according to the time of year
  - Christmas and other festive seasons will lead to heavy cash withdrawals
    - However, most of that cash is spent in shops and therefore finds its way bank into bank deposits quite quickly
      - Money taken as loans also tends to get spent quite quickly – it, too, finds its way back into bank deposits



- In the UK, the Bank of England encourages banks to hold back in reserve about 6% of all eligible deposits
  - Other countries in Europe have a much lower reserve requirement
  - In the United States, the reserve requirement for certain types of deposit is much higher at 10%
    - Even with a reserve requirement of 10% this still means that US banks can lend out again 90% of all the money on deposit with them
      - This process can be repeated over and over again

The cycle of borrowing, spending and saving

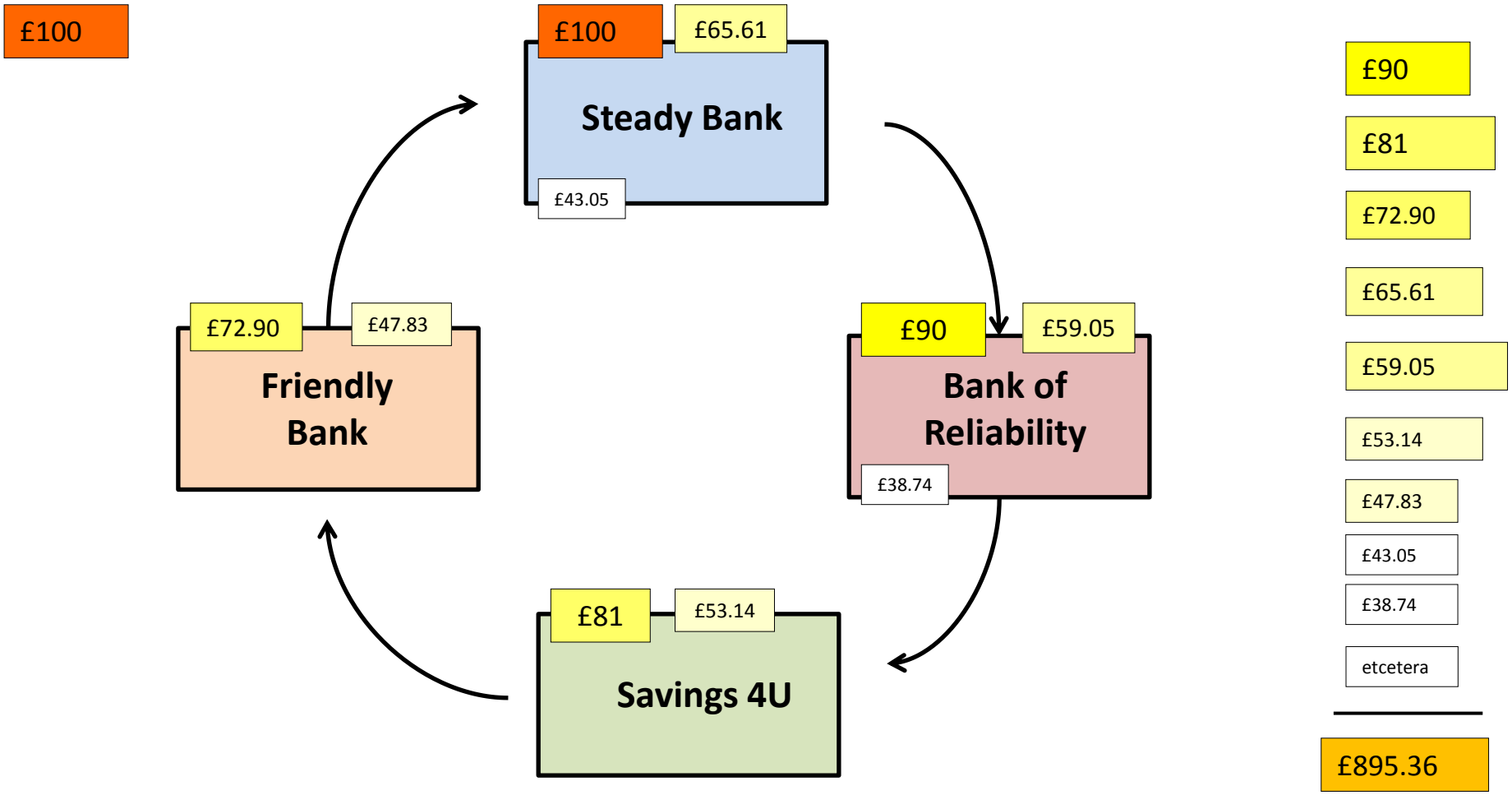
People borrow money in order to spend it – either by paying back a debt, or by purchasing goods or services, or by investing, or by acquiring an asset like a car



- In each case, the money spent will find its way back into a bank deposit

How lending creates money

If banks only have to hold in reserve 10% of all deposits, they can lend out the remaining 90% in more than 50 consecutive cycles of ever decreasing amounts



After 50 cycles of deposits and lending, £994.85 has been placed on deposit, £99.48 has been held back in reserves and £895.36 has been lent out to borrowers

Electronic money

In the UK, only around 4% of all the money in the economy is now represented by banknotes or coins. The remainder is represented by computer entries

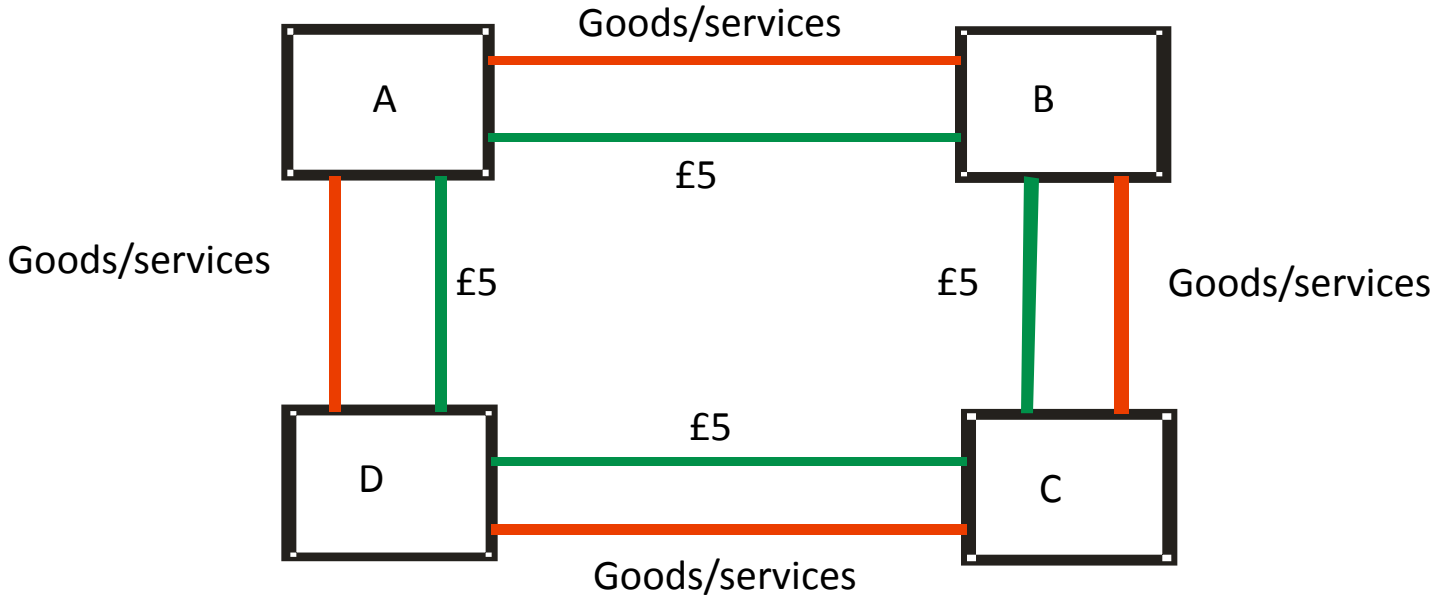
- Modern technology has now made it quick and easy to pay for everyday items using touch cards and mobile phone transfers
  - It make sense to pay direct from one computer entry directly to another without having to take out and pay in cash in between

Contactless payment systems will reduce the need to carry cash

- This has accelerated the switch away from cash
  - It is now no longer possible, for instance, to pay for a bus journey in London using cash
    - In 2014, non-cash payments exceed cash payments for the first time. It is estimated that card payments will exceed cash payments in the UK within 10 years

- With less cash floating around the system, a greater proportion of the overall money supply will remain in bank accounts
  - "Cash under the mattress" is not available to be recycled again into loans by the financial institutions. Money in an account most definitely can.

The importance of velocity of circulation



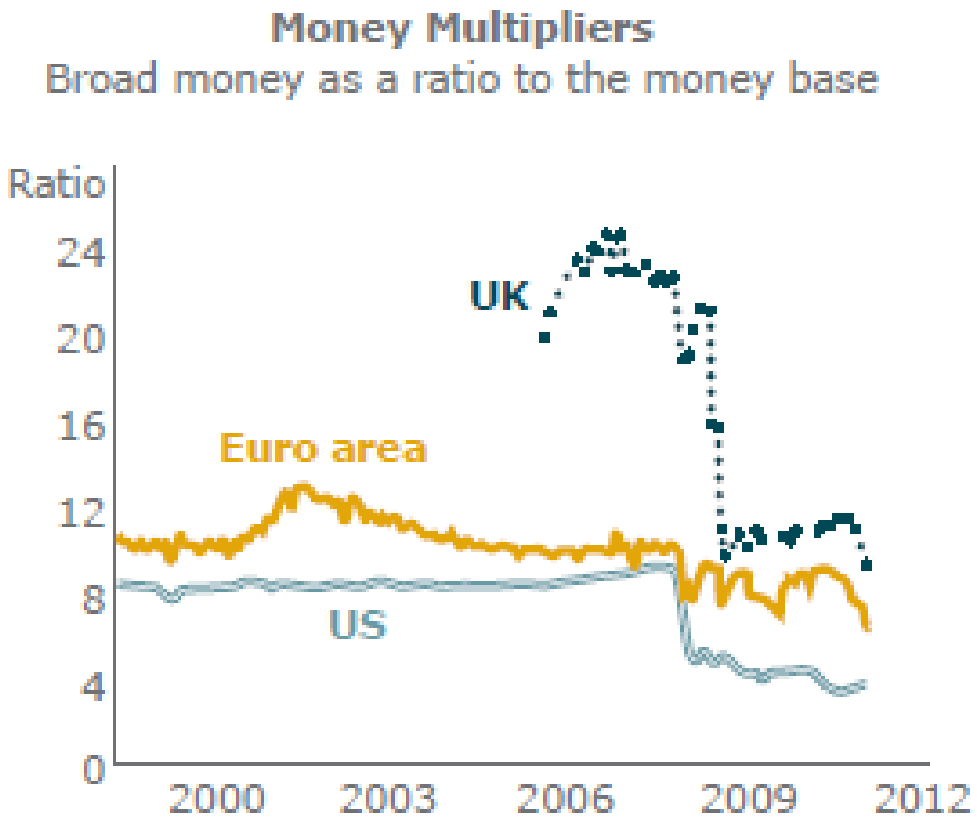
Four households: supply of money per household = £5
Each household spends £5 and receives goods and services in exchange

Outcomes from this simplified model of economy:

- ❑ Money supply is £5
- ❑ Velocity of circulation (i.e. the number of times money changes hands) is 4
- ❑ Value of the national income is £20 -- each household has earned £5
- ❑ Value of the national expenditure is £20 -- each household has spent £5
- ❑ Value of total output is £20 -- each household has produced £5 of goods

So national income = national expenditure = national output

Money multiplier



- The effect of the money multiplier can be seen most clearly in an economic recession
  - When people are fearful of losing their jobs, they borrow less and save more
    - In the UK, “broad money” collapsed with the onset of the global financial crisis in 2008

Savings

Savings are a way of transferring spending power from the present into the future. Facilitating saving is a key role of financial markets

- The main features of a savings account
  - A simple savings account will not support a debit card or chequebook and cannot be overdrawn.
    - Some do provide a cash card and others (mainly building societies) give a passbook.

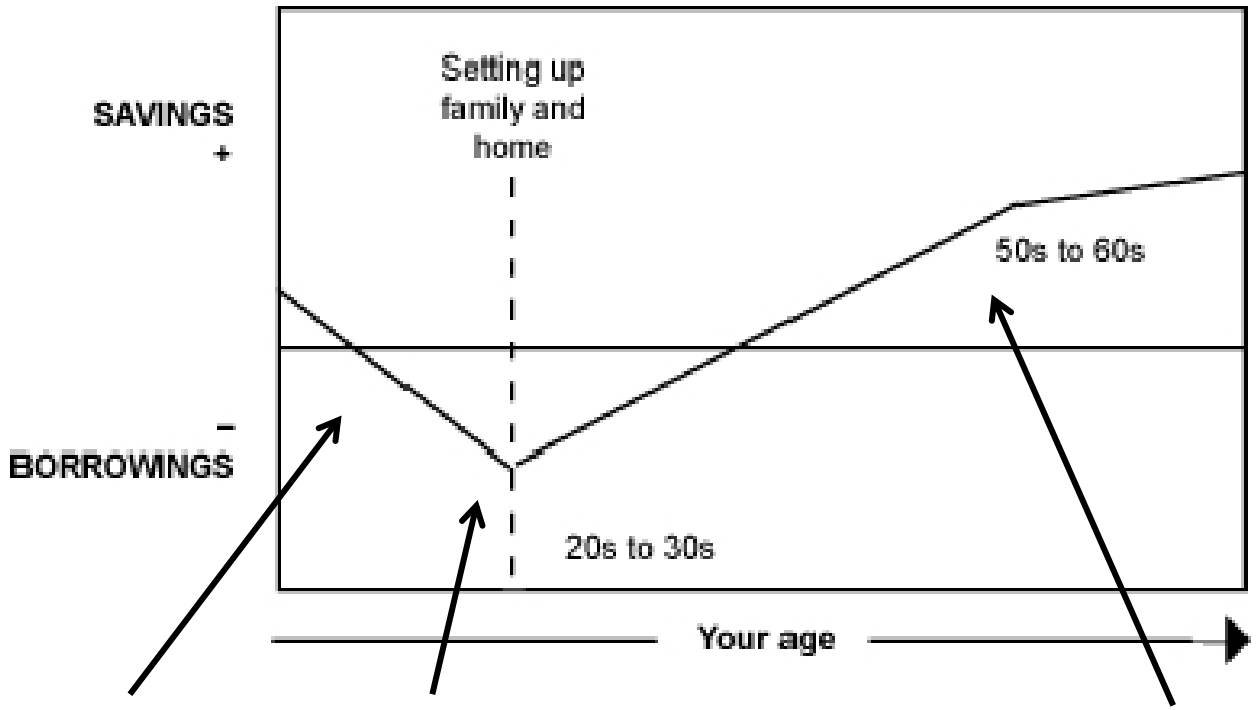
  - The account earns interest at a variable rate, usually added quarterly.
  - Withdrawals can be made over the counter at a branch, but increasingly customers manage them online and over the phone.

- The interest rates are usually tiered, so that people earn more interest on larger savings than they do on smaller ones.
  - They also earn more interest if they agree to keep their savings in the account for a longer, or fixed, period of time

Account Name	Lifestyle Instant			
Interest Rates	Variable Rate			
(AER)	Interest Tier	Gross %	AER%	NET%
	£100,000+	0.65	(0.65)	0.52
	£50,000+	0.55	(0.55)	0.44
	£20,000+	0.45	(0.45)	0.36
	£10,000+	0.35	(0.35)	0.28
	£5,000+	0.25	(0.25)	0.20
	£1,000+	0.25	(0.25)	0.20
	£1+	0.10	(0.10)	0.08
Tax Status	Interest is paid net unless a gross registration form has been registered			
Conditions for Bonus Payment	Not applicable			
Withdrawal arrangements	• Maximum cash withdrawal on demand £500 per day • Maximum cheque withdrawal on demand is subject to branch/agency signing limits • Transferred to a designated UK bank account • Instant access			
Access	Email/post/branch/agency/introducers			

Changes through the life-cycle

The balance between savings and expenditure can change through someone's life



Early in life, when you have few financial commitments and may still be living in the family home, most of your money is yours to save or spend as you wish.

As you move into the stage of establishing your home and family, your income will be stretched. There will be little surplus (if any) to save and you may well have to borrow to finance the things that you need.

Later on, your responsibilities may reduce, debts may be paid off, income often increases over time, children will grow up and leave home, and you may even receive 'lump sum' payments – from inheritances, for example, or insurance or pension products.

How commercial providers make profit

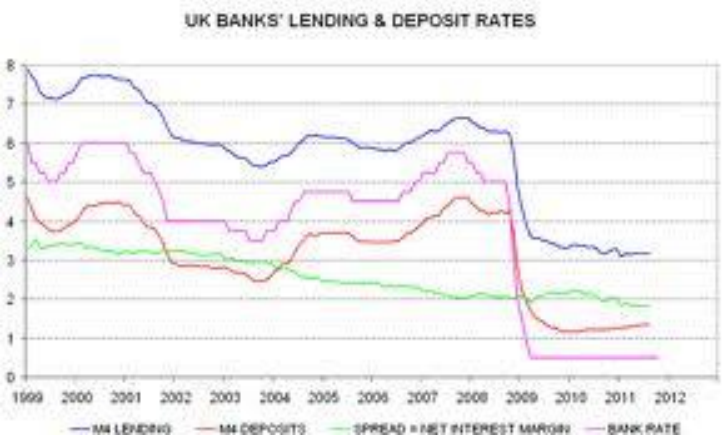
Banks and building societies make their income from two main methods

- Charges, e.g.
  - set fee per transaction, or
  - fee for a copy of a bank statement

Provider	Foreign loading fee	Purchase fee	Withdrawal fee	Total charge
N&P Norwich & Peterborough Building Society	No fee	No fee	No fee	£0.00
Nationwide	2.00%	No fee	£1.00	£20.00
first direct	2.75%	No fee	2.00% or £1.75min, £5.00 max	£29.38
HSBC	2.75%	No fee	2.00% or £1.75 min, £5.00 max	£29.38
The co-operative	2.75%	No fee	2.00% or £2.00 min	£30.63
BARCLAYS	2.99%	No fee	2.00% or £1.50 min, £4.50 max	£29.93
Lloyds TSB	2.99%	£1.00	1.50% or £2.00 min, £4.50 max	£42.23
Santander	2.75%	£1.25	1.50% or £1.99 min	£43.08
HALIFAX	2.75%	£1.50	£1.50	£43.13
NatWest	2.75%	£1.25	2.00% or £2 min, £5.00 max	£43.13
RBS	2.75%	£1.25	2.00% or £2 min, £5.00 max	£43.13
BANK OF SCOTLAND	2.99%	£1.50	1.50% or £2.00 min, £4.50 max	£47.43

Bank of Scotland — part of Lloyds — charges more than £47 in fees when someone makes ten £50 purchases and five ATM withdrawals of £50 if they use their debit card while abroad on holiday.

- Interest rate margin, e.g.
  - the difference between the higher interest rates that a bank charges for loans and the lower interest rates that it pays people on savings accounts
    - ABC Bank charges its borrowers 7% and pays its savers 2%.
    - The difference of 5% covers its costs (administration, staffing and premises, etc) and its profit.



Professional and retail business

The Financial Services industry is divided into two distinct areas. The first is:

- **The professional sector**

  (also known as the wholesale, or institutional sector)

  - Business to business

Professional and retail business

The second distinct area of the Financial Services industry is:

- **The retail sector**
  - Business to customer

Investment banks

Investment banks deal in wholesale financial markets. They undertake a much wider range of activities in the bond, equities and currency markets.

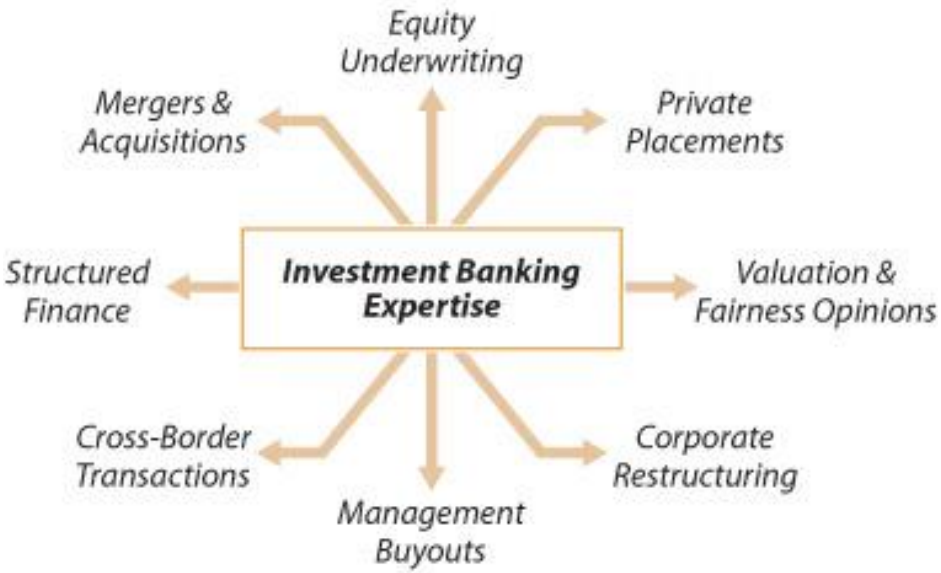
Investment banks provide advice and arrange finance for governments or companies who want to issue bonds.

They also provide advice and arrange finance for companies who want to float on the stock-market or issue more shares or bonds in the secondary market, or carry out mergers and acquisitions.

Investment banks (cont.)

An investment bank will probably provide some or all of the following services:

- Corporate finance and advisory work – normally in connection with new issues of securities for raising finance, takeovers, mergers and acquisitions



- Treasury dealing for corporate clients in foreign currencies, with financial engineering services to protect them from interest and exchange rate fluctuations

Investment banks (cont.)

An investment bank will probably provide some or all of the following services:

- Securities trading in equities, bonds and derivatives

- Provision of stock-broking and distribution facilities

The global foreign exchange market

The foreign exchange market is the largest financial market in the world – by far. Foreign exchange is often referred to as:

- ❑ Forex
- ❑ FX

The forex market involves the trading of one currency for another.

- ❑ Most currencies are allowed by their central banks to "float"
  - ➢ The value of one currency versus another will depend on the economic health of the issuer
    - Interest rates and the balance of payments are key determinants of the value of a country's currency

GBP vs USD from 2008 to 2010

Currency trading

The forex market is an over-the-counter (OTC) market, where brokers and dealers negotiate directly with each other.

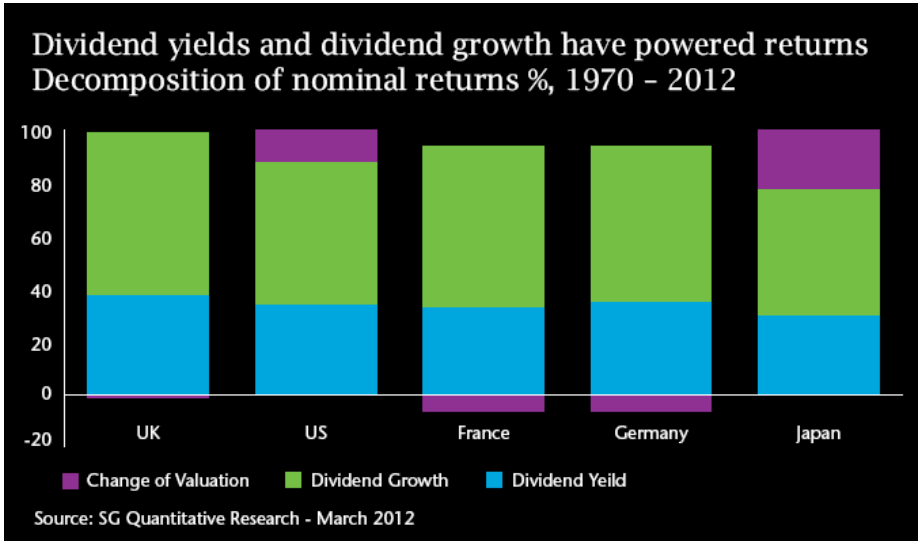
- Individual forex traders (i.e. retail investors) are becoming increasingly important in the global forex market.

Equities, also known as shares or stocks

Companies issue shares. If you own shares in a company, you effectively own a part of the business.

- People who hold shares in a company may benefit from that company's business growth in two ways:
  - They usually get income, through distributions of the business's profits, called 'dividends' and paid out to shareholders regularly – usually twice a year;
  - They also have the potential for capital growth if the price of the shares goes up

- Given this possible combination of income and capital growth, shares offer potentially quite a high reward, with a correspondingly high risk.
  - If the company does badly and has no profit to distribute in a year, there may be no dividends



  - In addition, the share price can also fall – so the investor may make a capital loss.

Derivatives and commodity markets

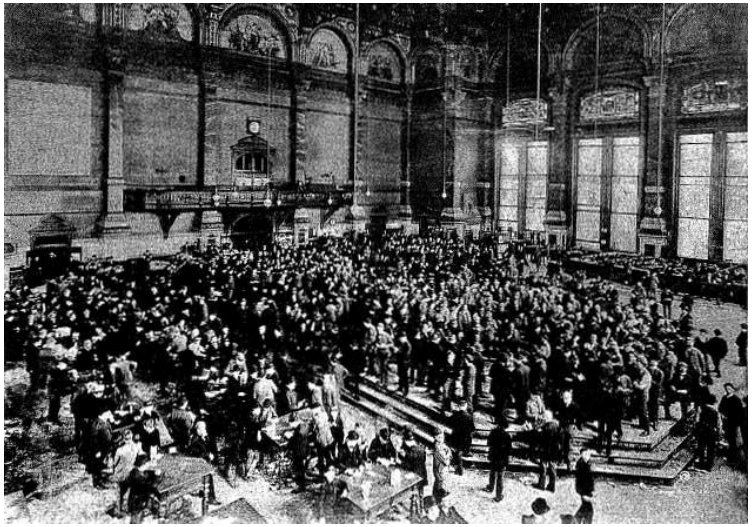
A derivative is simply a financial instrument whose price is <u>derived</u> from the price of another asset:

- That other asset is known as the "underlying asset"
  - Or, just as the "underlying"

The Credit Crunch has given derivatives the reputation of being extremely complex instruments, but some of them are very simple

The main purpose of derivatives is to reduce risk faced by organisations and / or individuals. Originally, these tended to be farmers, or food producers

- The world's first derivatives exchange, the Chicago Board of Trade (CBOT) opened in 1848
- Prairie grain farmers "hedged" their price risk on the CBOT



Basic Forward Contract

- In its simplest (and oldest form) a derivative contract was a way of ***locking in future prices***.
- This was (and is) very important for buyers and sellers of agricultural products whose prices can fluctuate significantly...

Farmer Jones is worried about the fluctuating price of his potatoes which are due to be harvested in 6 months.

Currently potatoes are selling at £100 per tonne, but they have been as low as £70 and as high as £140. He needs a stable profit as he wants to invest in machinery next year

He can make a profit as long as he sells for at least £90 per tonne.

Springfields Ltd makes potato chips and sells to major supermarkets (e.g. Tesco)

The company is also worried about the fluctuating price of potatoes (it has a two-year contracted price with Tesco). Its profits are therefore fluctuating due to changing raw material costs.

Springfield can make a profit as long as it can buy potatoes for no more than £110 per tonne.

Question: What should Farmer Jones and Springfield's do next?

Basic Forward Contract

Question: What should Farmer Jones and Springfield's do next?

Farmer Jones should make a deal with Springfield's to sell the company his potatoes in 6 month's time at a price fixed now at £100 per tonne.

He is now guaranteed £100 per tonne and is thus assured of a profit (assuming a reasonable harvest!)

Springfield's Ltd should make a deal with Farmer Jones to buy his potatoes at £100 per tonne.

Whatever happens to potato prices on the open market, it is guaranteed a supply of potatoes at a cost which will enable the company to make a profit.

6 months later… potatoes can be bought on the open market for £120 per tonne. What happens next?

Farmer Jones is still obliged to sell Springfield Ltd his potatoes at £100

He has made a profit and limited the risk BUT he has missed out on an extra £20 per tonne…

Springfield's Ltd will obtain its potatoes at £20 below market cost.

Given it has a fixed price, this will not increase Springfield's profits BUT it has avoided the extra cost that would have been incurred…

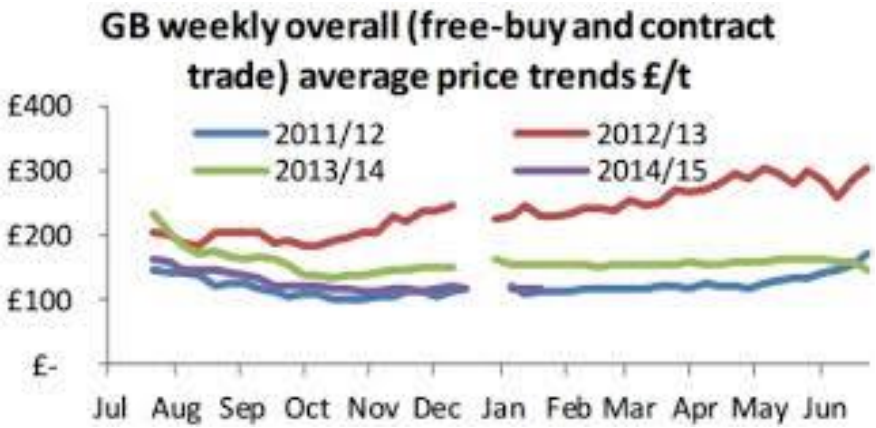
Basic Forward Contract – Summary

- Farmer Jones has lost out by £20 per tonne and Springfield has gained by £20 per tonne.
  - This type of forward contract is a **zero-sum game** meaning ***what one party gains, the other loses.***

- This forward contract is also a type of **hedge**
  - A **hedge** is a ***form of protection against loss on a transaction by making balancing or compensating transactions.***

Basic Forward Contract – Summary (cont.)

- *In this example, Farmer Jones was protecting himself against potential losses arising from future potato prices by entering into an agreement with Springfield Ltd to lock in the price now.*



- A forward contract is a **derivative**
  - This is because the ***value of the forward contract during its lifetime is derived from the value of something else*** *– in this case, the price of the actual potatoes.*