

Money and Interest Rates

The functions of money are that it is...

- Medium of exchange
- Means of storing wealth
- Means of evaluation

Money Supply

- The monetary base consists of cash in circulation outside the central bank plus banks reserves within the central bank.
- Broad money includes both time and sight deposits, retail and wholesale bank and building society deposits.
- Bank deposits are the largest component of broad money supply.

The functions of the central bank are...

- Issue notes
- Act as a bank
- Provider of liquidity to banks
- Oversees the activities of banks and other financial institutions
- Operates monetary and exchange rate policy

The banking system

- Includes retail banks, wholesale banks and building societies.
- Banks are in the business of deposit taking and lending.
- Banks liabilities are customer's deposits.

Banks assets include...

- Cash and reserve balances in the central bank.
- Short term loans
- Long term loans

Banks balance sheets are influenced by 3 important considerations...

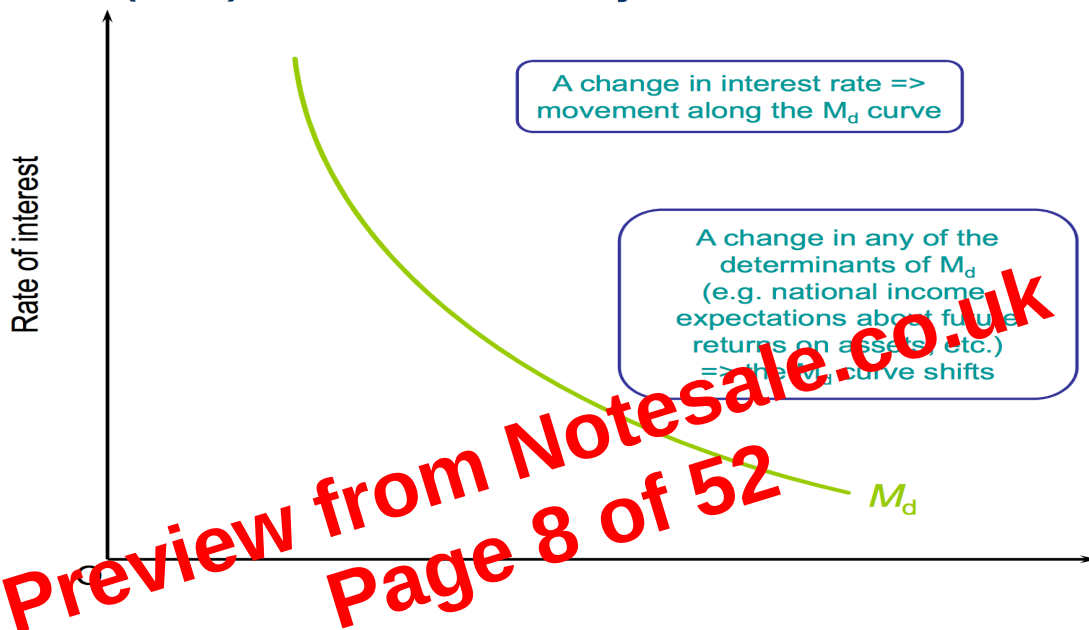
1. Profitability
 - Profits are made by lending money out at a higher interest rate than that paid to depositors.

- Seasonal
- Financial innovations

Speculative demand for money depends on...

- Rate of interest on money
- Expectations of changes in price of other assets

The (total) demand for money curve



$$M_d = L_1 + L_2$$

M_d = Total demand for money

L_1 = Transactions and precautionary

L_2 = Speculative

Bank of England

Instrument independence...

- Chancellor of the Exchequer used to decide interest rates
- The 1988 Bank of England Act made the Bank independent to set interest rates. The government has the power to overrule in exceptional circumstances, this has not happened yet.
- Interest rates are decided by Monetary Policy Committee

Goal independence...

- Inflation target is set by the chancellor of the exchequer.

Long-term monetary policy control

- Its important to achieve long-term control of money supply as increasing money supply can not increase output in the long run.

The 2 major sources of monetary growth are...

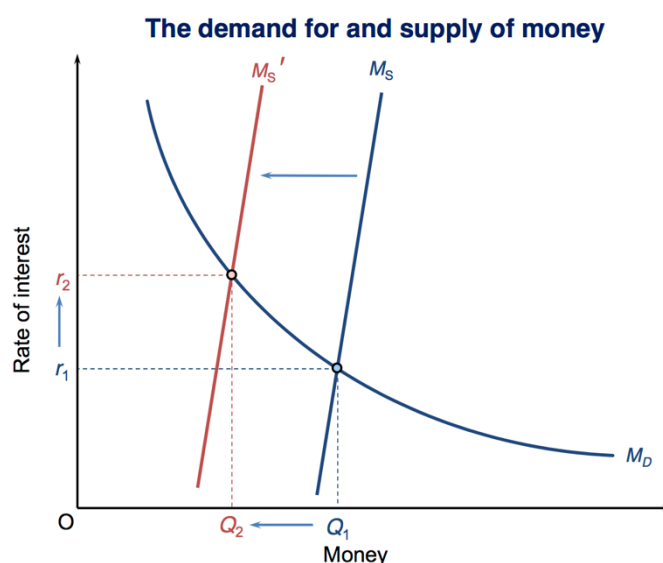
1. Lower bank liquidity ratio
 - Impose minimum reserves ratio
2. Public sector borrowing from the banking sector
 - restrict the size of PSNR

Short-term monetary policy control

- Assume CB wants to tighten monetary policy to fight inflation

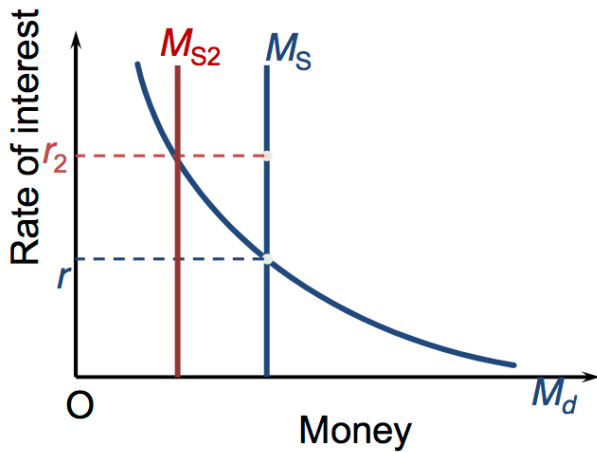
They may do this in 3 ways...

1. Controlling money supply
 - Reduce money supply, resulting in an interest rate rise
2. Controlling interest rates
 - Increase interest rates and then manipulate money supply

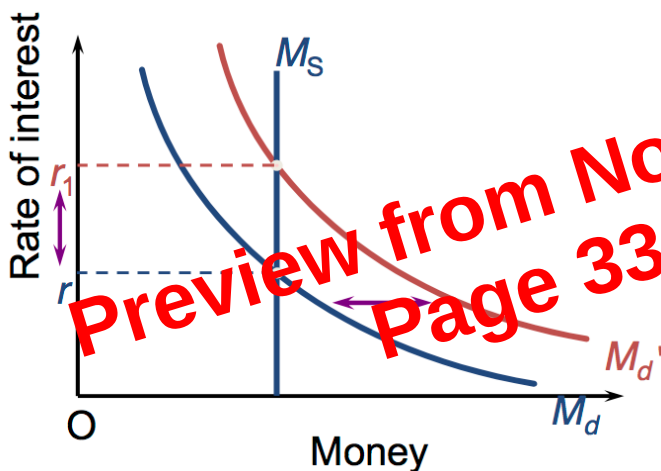


Potentially large fluctuations in interest rates

1. The demand for money is interest inelastic



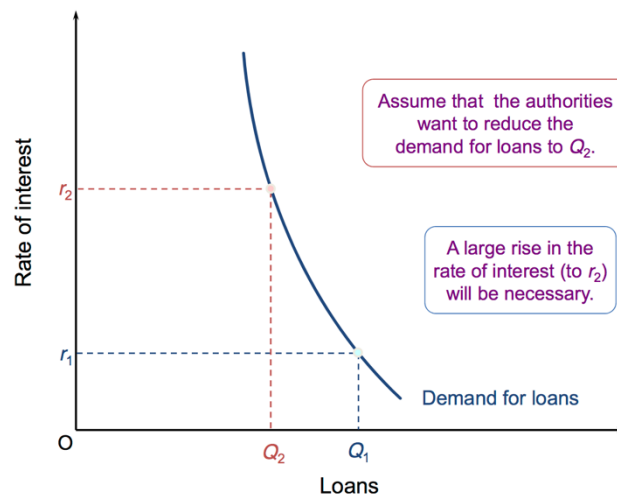
2. The demand for money is unstable
 - Its difficult to predict the effect of interest rates of a change in M_s .



Problems controlling interest rates

The demand for loans is inelastic, this leads to large rises in interest rates...

- May discourage investment and growth
- Higher costs of production, cost push inflation
- Politically unpopular
- High rates on government bonds
- Inflows of money from abroad drive up the exchange rate



Demand side policy in the UK

Fiscal policy...

- Golden rule
- Sustainable investment rule
- Some flexibility

Monetary policy...

- Target of 2% CPI inflation set by govt.
- MPC adjust interest rates to meet 2% target based on projections 2 years prior
- Forward guidance
- Benefits of transparency
- Benefits for expectations

SUPPLY-SIDE POLICY

Demand side policy may affect the real activity in the short or medium run.

Supply side policies attempt to increase the potential level of output and shift the LRAS curve to the right (i.e. increase output at any given level).

Economic growth and supply-side policies

Determinants of economic growth...

- Increase in quantity/ quality factors
- Increase in productivity
- An important element in the growth of productivity is technological progress

Supply side policy seeks to encourage...

- Investment in R&D
- Firms to adopt new ideas, innovations, new production processes and organisational structures
- Training and education, development of skills and flexible working practices.

Real exchange rate

- The real exchange rate is the relative price of the goods of two countries.

$$RE = E * P_x / P_m$$

RE = Real exchange rate

E = Nominal exchange rate

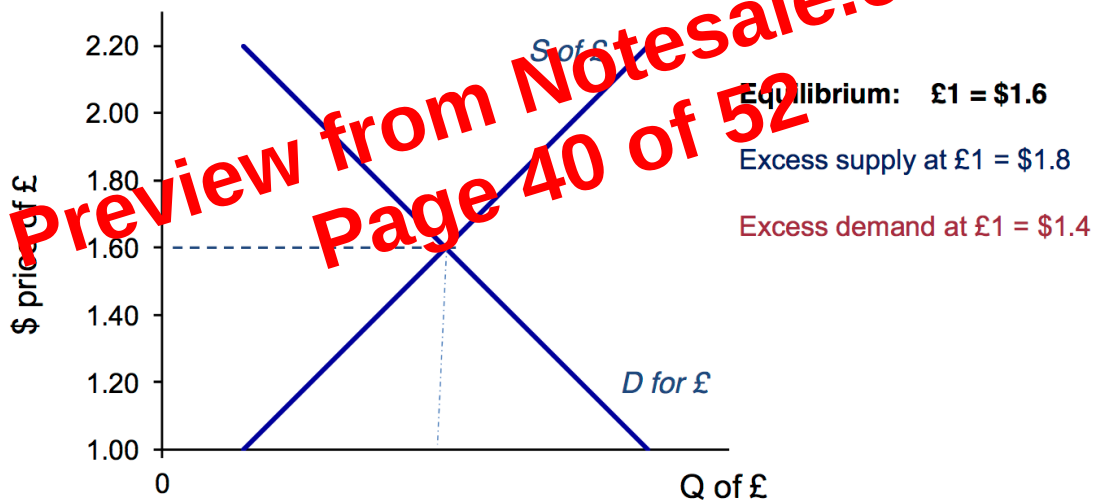
P_x = Price index of exports

P_m = Price index of imports

- If a country's export prices rise faster than the foreign currency prices of its imports (P_x/P_m), its real exchange rate will appreciate.
- Gives a better idea of the quantity of imports a country can obtain from selling a given quantity of exports.

Determination of the rate of exchange

- A free floating exchange rate is determined by demand and supply



- Exchange rate changes are rare and are called revaluations
- Under a fixed exchange rate and perfect capital mobility, the domestic interest rate must be equal to the foreign interest rate.

Under a fixed exchange rate...

- The CB give up monetary policy as a policy instrument
- Fiscal policy becomes more effective

Exchange rate regimes & monetary policy

Flexible exchange rate...

- Monetary policy relatively effective
- Direct effect on AD
- Reinforced by a change in the exchange rate

Fixed exchange rate...

- Monetary policy used only to maintain the interest rate equal to the foreign interest rate
- Monetary policy more effective under flexible exchange rate

Exchange rate regimes & fiscal policy

Flexible exchange rate...

- Fiscal policy relatively ineffective
- Direct effect on AD
- Offset by effect on interest rates & exchange rate

Fixed exchange rate...

- Fiscal policy relatively effective
- Directive effect on AD
- Reinforced by accompanying monetary policy to offset effect on interest rates and exchange rates
- Fiscal policy more effective under fixed exchange rates.

Deleveraging – When financial institutions cut back on lending.

2. A financial crisis can begin with an asset price boom and bust
 - A pricing bubble starts, where asset values exceed their fundamental prices
 - When the bubble bursts and prices fall, corporate net worth falls too.
 - Financial institutions also see a fall in their assets, leading again to deleveraging.
3. A financial crisis can begin with a spike in interest rates or an increase in uncertainty
 - Many 19th century crises initiated with a spike in rates, due to liquidity problems or panics
 - Moral hazard increases as loan repayment becomes more uncertain
 - Other periods of high uncertainty can lead to crises, such as stock market crashes or the failure of a major financial institution.

Stage 2 – Bank panics

Deteriorating balance sheets lead financial institutions into insolvency. If severe enough these factors can lead to a bank panic.

- Panics occur when depositors are unsure which banks are insolvent, causing all depositors to withdraw all funds immediately.
- As cash balances fall, financial institutions must sell assets quickly, further deteriorating their balance sheet
- Adverse selection and moral hazard become severe, it takes years for a full recovery

Bank failure – When a bank is unable to meet its obligations to its depositors because it has become insolvent, or too illiquid to meet its liabilities.

Stage 3 – Debt deflation

If the crisis also leads to a sharp decline in prices, debt deflation can occur (where asset prices fall but debt levels do not adjust) increasing debt burdens...

- Debt levels are typically fixed, not indexed to asset values.
- Price level drops lead to an increase in adverse selection and moral hazard, which is followed by decreased lending.
- Economic activity remains depressed for a long time.