



Managing the UK economy

Fiscal and monetary policy since 1945

Week 2: The financial system and monetary policy (an introduction)

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Plan for today

1. Money
2. Bonds & interest rates
3. The Central Bank & monetary policy
4. The stock market

What is money?

Money is a *financial asset* that serves simultaneously as:

- medium of exchange.
- unit of account.
- store of value.



Money is a IOU that everyone in the economy trusts

The 'broad money' aggregate

Includes *most liquid* financial assets in the economy.

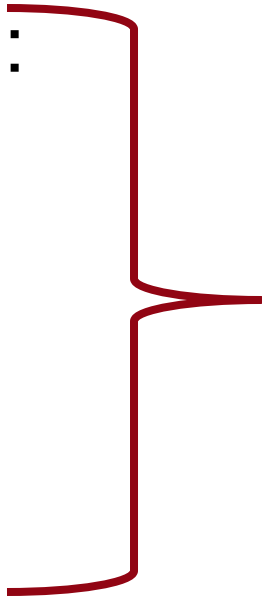
1. Government money [*narrow money*, $M0$]:

- currency & bank reserves.

2. Bank deposits:

- saving & checking accounts.

Broad money
($M4$)



Currency

- Banknotes & coins.
- They represent a debt of the Central Bank.
- In the past redeemable in gold.
- Today: *fiat money*.



Bank reserves

- Balances held by commercial banks at the Central Bank.
- Convertible in currency.
- Why banks hold reserves?
 - to make payments to one another
 - to have some liquidity to face withdrawals.



Bank deposits

- Current accounts & savings accounts.
- Debts of commercial banks with their customers (households and firms).
- Convertible in currency.



Why we trust (broad) money?

Because it is backed by the State.

- Accepted as tax payment.
- *Legal tender*: can always be used to repay a debt.



Money creation

- Money holdings in the UK (July 2024):
 - Currency: £86.9 Billions (6%).
 - Bank deposits: £2,221 Billions (94%).
- Banks create new deposits (= new money) when they lend.
- BoE *does not* control the quantity of money.
- But it can partly influence its growth through the interest rate.



Bonds

Example:

AstraZeneca sells a bond

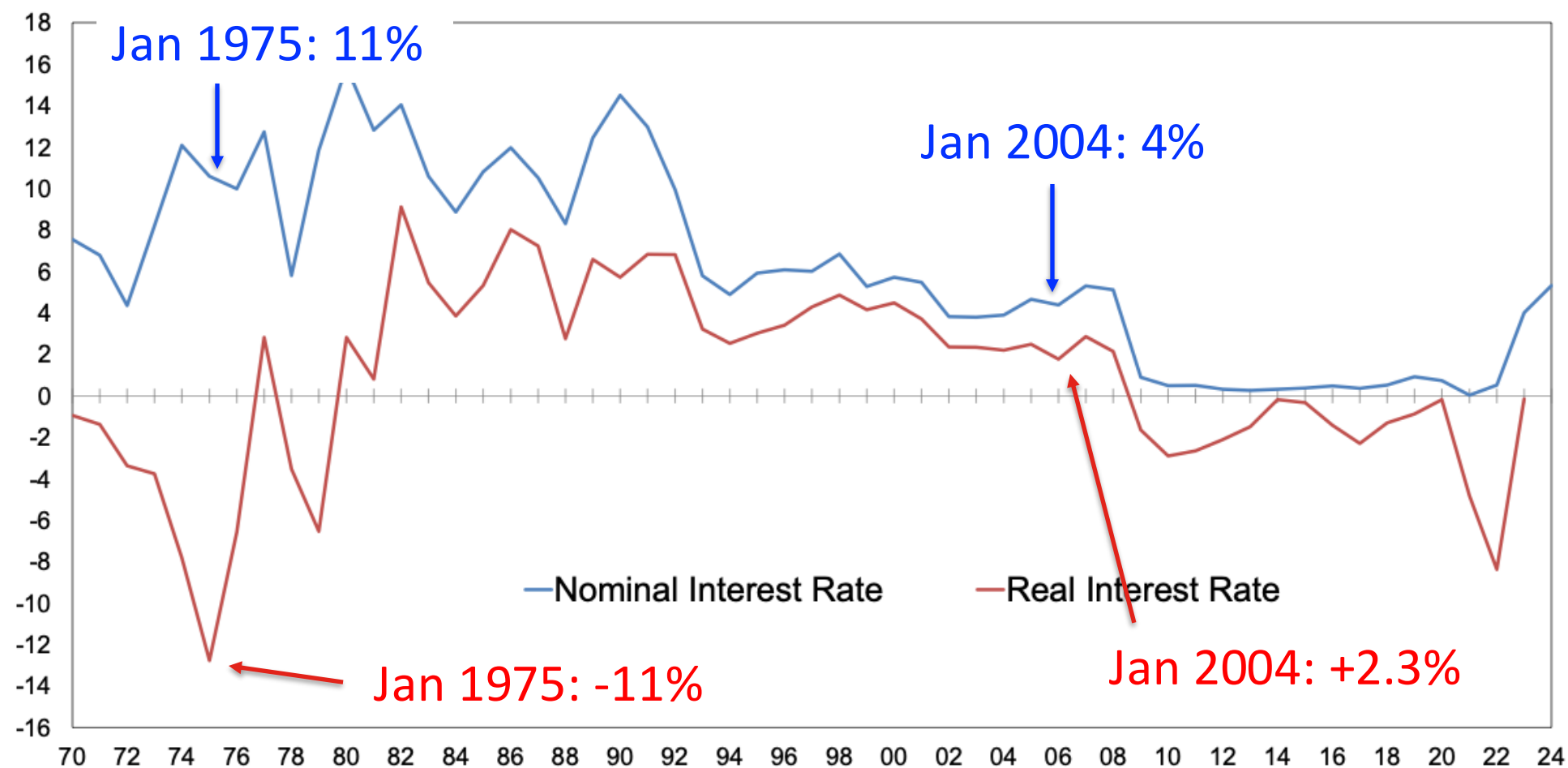
- The bond pays £110 in 1 year
- Price of the bond today: £100
- **Interest rate:** rate of return earned by bond buyer

$$i = \frac{110 - 100}{100} = 0.10 = 10\%$$

The higher the interest rate, the lower the bond price



Interest rate on 1-year UK gilts



Inflation rate:

- 23.4% in 1975
- 1.7% in 2004

Nominal vs Real interest rate

- *Nominal* interest rate = rate of return in current pounds.
- *Real* interest rate = rate of return in real purchasing power.
- *Ex-post* (realized) real interest rate:

$$r_t \approx i_t - \pi_{t+1}$$

- *Ex-ante* (expected) real interest rate:

$$r_t \approx i_t - \pi_{t+1}^e$$

Interest rates & risk premia

- What determines the interest rate on a particular bond?
 - Economy-wide factors (monetary policy).
 - Bond-specific factors: *maturity & riskiness*.
- Let's ignore maturity (assume 1-year) and focus on risk.
- Interest rate on a risky bond:

The diagram shows the formula $i_R = i + x_R$ in blue. The variable i is circled in red, with a red arrow pointing to it from the text "Riskless interest rate". The variable x_R is also circled in red, with a red arrow pointing to it from the text "Risk premium".
- x_R depends on prob. of default & *risk aversion* of investors.

Central Bank & Monetary Policy



The Central Bank

- Manages the currency and monetary policy.
- Oversees the banking system.
- Generally, a CB wants low inflation & low unemployment.
- The Bank of England *mandate*:

“to maintain price stability, and subject to that, to support the economic policy of Her Majesty’s Government, including its objectives for growth and employment.”



The Central Bank balance sheet

Liabilities	Assets
Currency	Foreign exchange reserves
Commercial bank reserves	Securities
Government's account	Other items
(Capital)	

Monetary Policy

- The Central Bank controls the risk-less interest rate in the economy.
 - Overnight interbank rate.
 - Sterling Overnight Index Average (SONIA) in UK
- CB *increases* rates to cool down the economy & reduce inflation.
- CB *decreases* rates to boost economic activity.



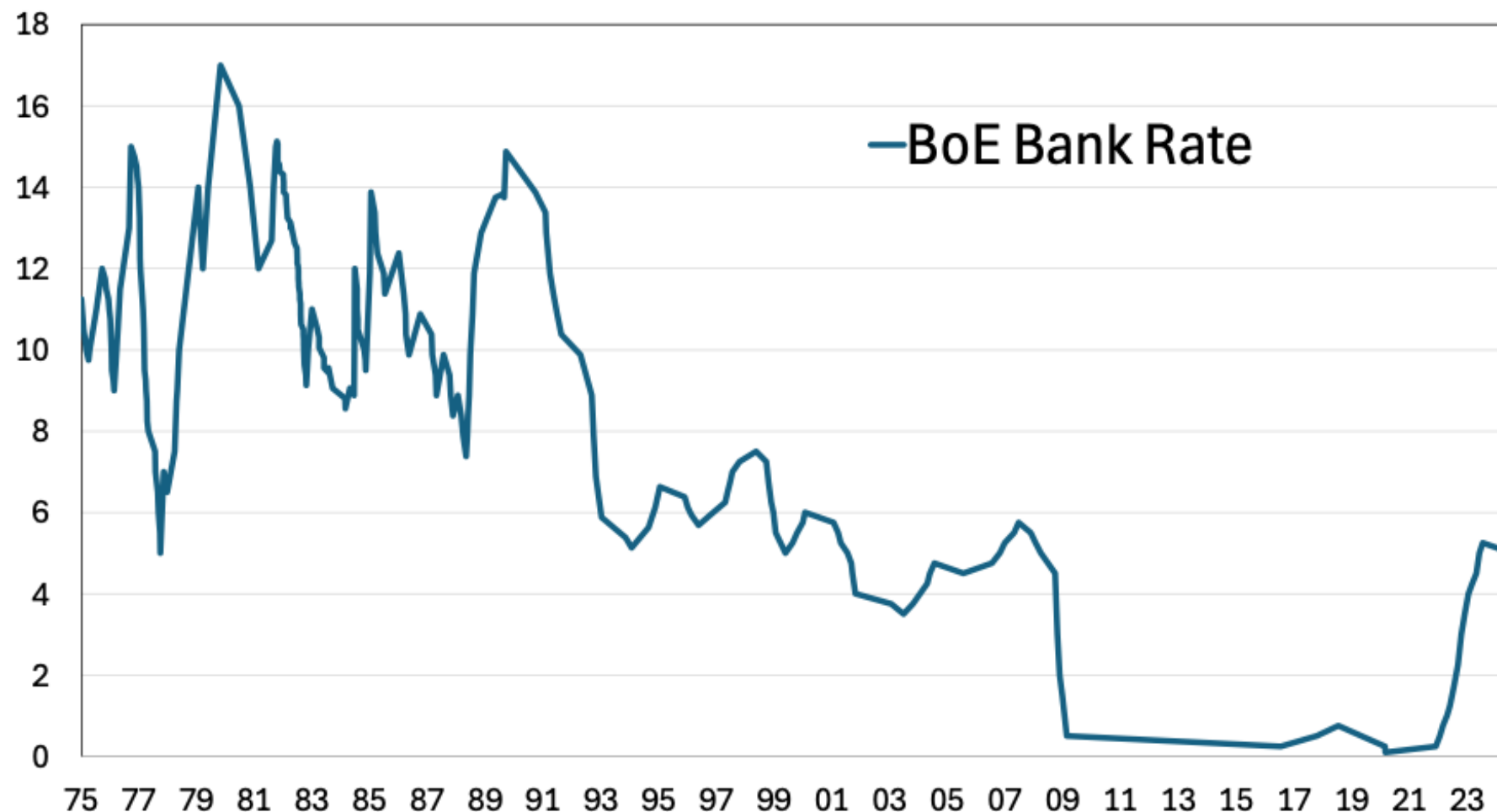
How does the BoE control interest rates?

- BoE sets the Bank rate
 - *The interest rate BoE pays & charges on bank's reserves*

Bank rate → SONIA → interest rates on bank loans, mortgages & bonds

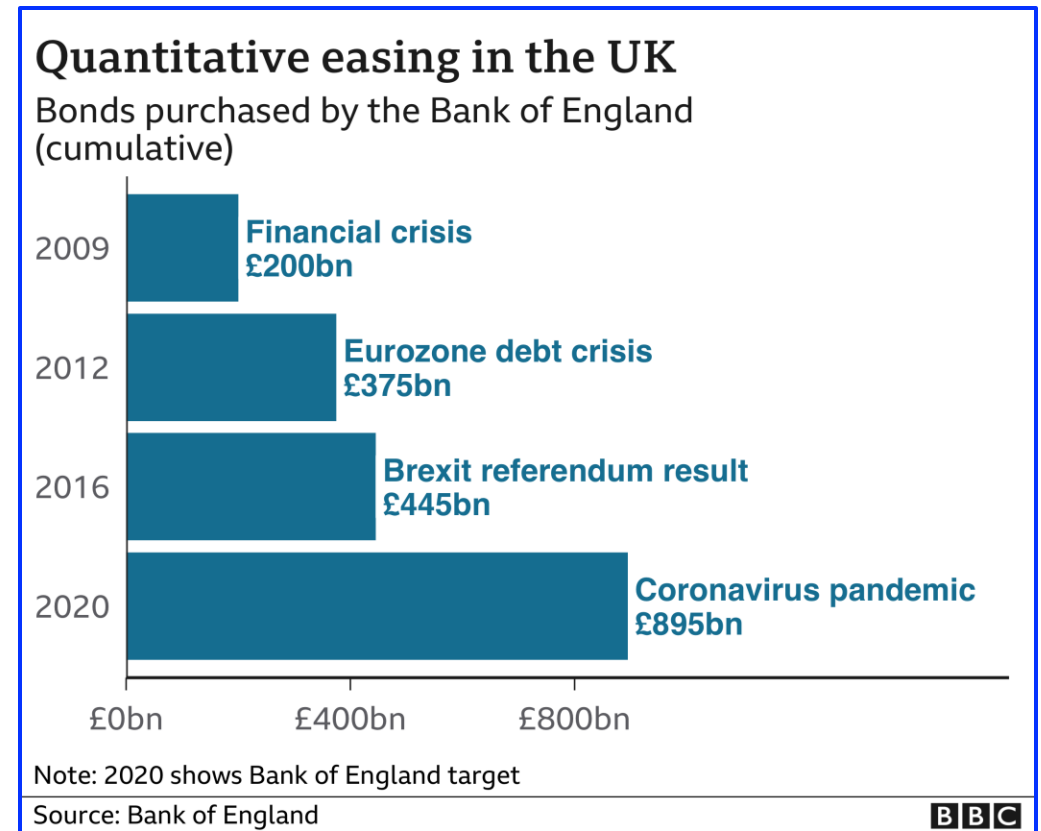


Bank Rate (Jan 1975 to Aug 2024)



Quantitative easing

- Unconventional monetary policy tool.
- Large-scale bond purchases to further decrease risky & long-term interest rates.
- BoE gives banks reserves for these assets.
- Typically used when Bank rate is already at the zero lower bound (ZLB).
- Huge increase in BoE balance sheets.



The stock market



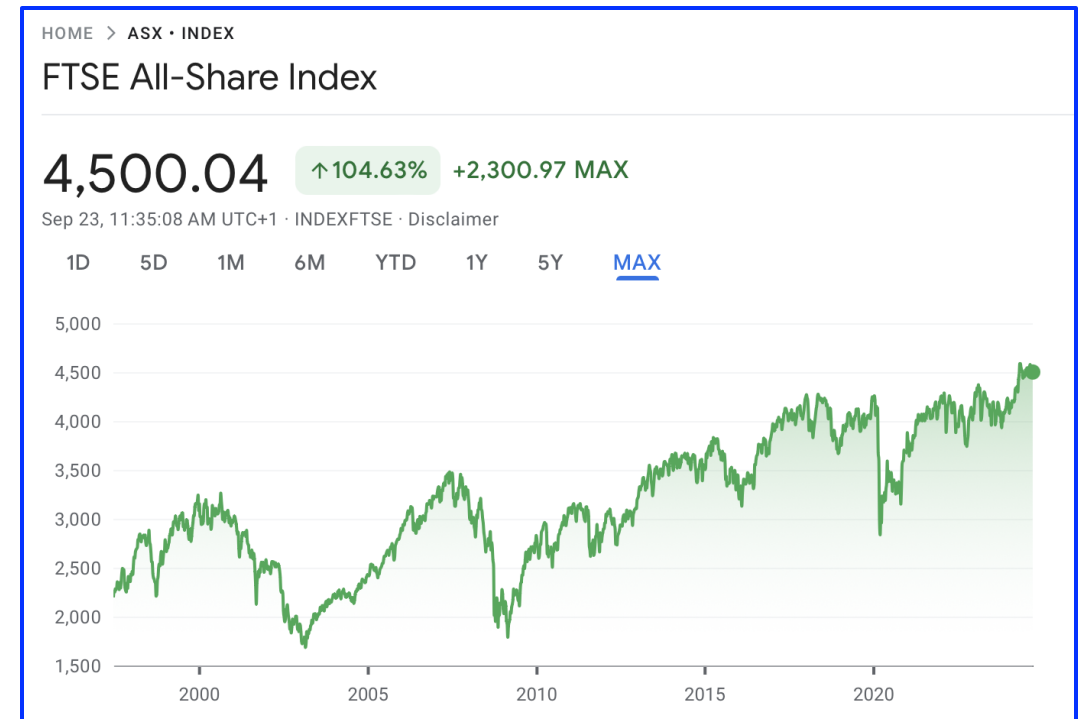
The stock market

- Another way for firms to raise external funds.
- Stock (or *share*) = an ownership share in the issuing company.
- Stock-holders receive *dividends*.
 - the retained (non-reinvested) profits of the company.
- A firm's stock price depends on its expected profitability.



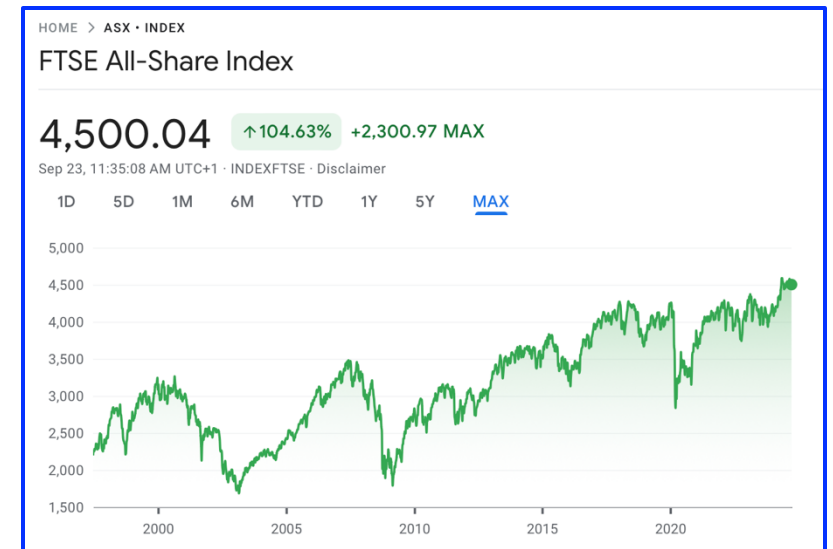
Stock market indexes

- Measure overall stock market movements.
- Track the market value of a given portfolio of stocks.
- In the UK:
 - FTSE 100
 - FTSE All-Share



What moves stock prices?

- For a single stock: the firm's expected future profits.
- On aggregate: expected future profits in the economy.
- Higher expected GDP growth → higher share prices
- Higher share of profits in GDP → higher share prices.
- Higher taxes on firms → lower share prices.
- Higher interest rate → lower share prices.



Case in point: UK share prices on 19 Sep 2024.

Market Summary > FTSE All-Share Index

4,559.20

+47.60 (1.06%) ↑ today

19 Sept, 13:11 BST • Disclaimer

+ Follow

1D 5D 1M 6M YTD 1Y 5Y Max



US Fed lowered interest rates more than expected during the night.

12.00pm:
Bank of England confirms no further interest rate decreases for now.

→ Effect of interest rates on share prices is another channel through which monetary policy can affect the economy.



Thank you for your attention