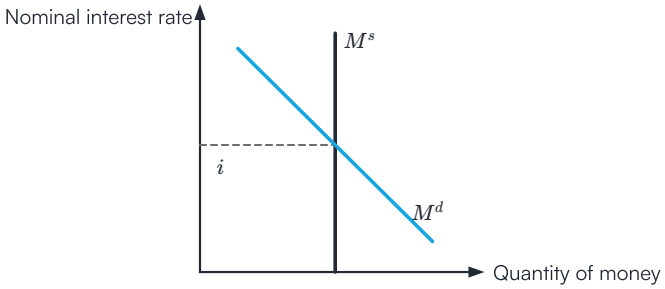
Achievable

AP MACROECONOMICS DUMP SHEET

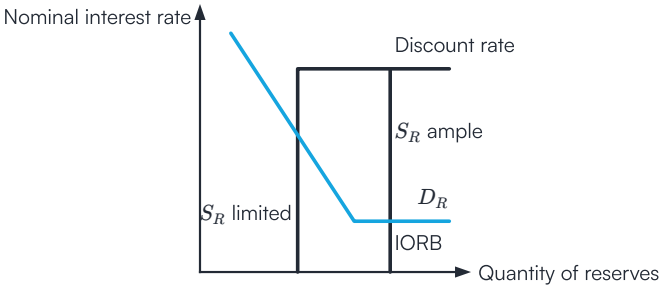
Unit 4: Monetary policy and financial markets

Money market



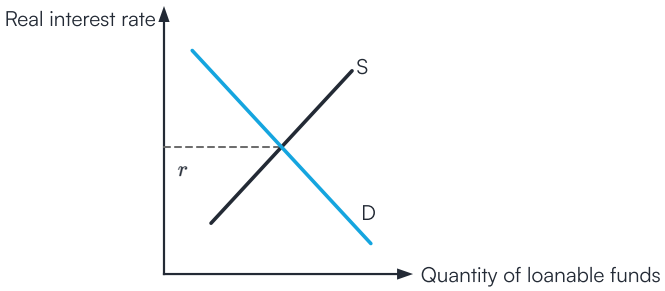
- **Supply:** vertical, set by the central bank. Right → rate ↓; left → rate ↑
- M^d **right:** income or price level ↑
- M^d **left:** better payment technology
- Rate below equilibrium: excess demand for money pushes it up

Reserves market



- Equilibrium rate = federal funds rate (FFR)
- **Limited reserves:** on the sloped part. Open market purchase → supply right → FFR ↓
- **Ample reserves (US):** on the flat part, FFR ≈ IORB. Open market operations do not move the FFR; the Fed moves administered rates, above all IORB

Loanable funds



- **Supply** is saving; **demand** is investment
- **S right:** saving or income ↑, budget surplus
- **S left:** budget deficit, wealth ↑
- **D right:** confidence, technology, expected demand ↑
- **D left:** business taxes or risk ↑

Monetary policy tools

Tool	Expansionary	Contractionary
Federal funds rate	↓	↑
Open market operations	Purchase	Sale
Interest on reserve balances	↓	↑
Quantitative easing	QE (buy)	QT (sell)
Discount rate	↓	↑
Reserve ratio	↓	↑

- **Administered rates:** discount rate, IORB, overnight reverse repo rate
- **QE:** buying assets other than T-bills; shifts reserve supply right

How policy reaches the economy

- **Fed goals:** maximum employment and stable prices, with a 2% inflation target
- **FFR:** the overnight rate banks charge each other, the Fed's policy rate
- **Expansionary:** rates ↓ → C and I ↑ → AD right → output ↑, price level ↑, unemployment ↓
- **Contractionary:** rates ↑ → C and I ↓ → AD left → output ↓, price level ↓, unemployment ↑
- **Open market purchase:** reserves and the monetary base ↑. With limited reserves, the money supply rises by more, through the multiplier