Lecture 8 Monetary Policy

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Macroeconomics 201

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The Road Ahead...

1. What Is Monetary Policy
2. Money Market and Federal Funds Rate
3. Monetary Policy and Economic Activity

What Is Monetary Policy?

- Federal reserve system
  - established in 1914 as lender of last resort to prevent panics
  - central bank in U.S., bankers' bank
  - make discount loans to banks, charge discount rate
- Nowadays Fed manages policy targets (money supply & interest rates) to achieve macro objectives
  - dual mandate: price stability & high employment
  - stability of financial markets & institutions
  - long-run economic growth
- Fed's conventional policy tools, e.g. open market operations, discount policy, reserve requirements

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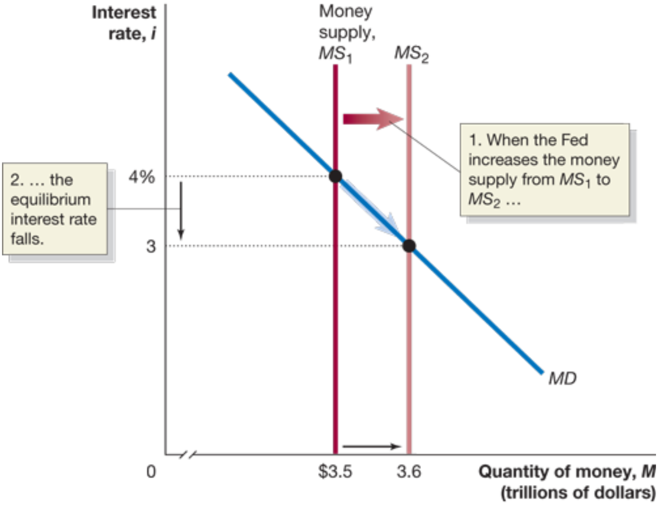
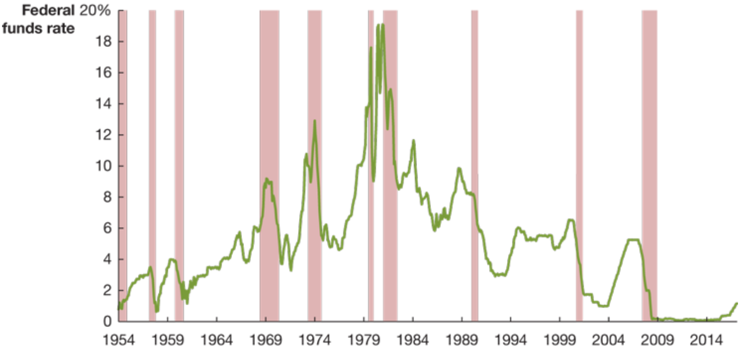
Money Market Equilibrium Revisited



- $M^s \uparrow \Rightarrow M^d < M^s \Rightarrow i \downarrow$ to restore equilibrium
- Short-term nominal rate v.s. long-term real rate

Federal Funds Rate



- Interest rate banks charge each other for overnight loans
- Target rate (Fed) v.s. effective rate (federal funds market)
- Open market purchase (sale) $\Rightarrow$ reserves supply $\uparrow$ ($\downarrow$) $\Rightarrow$ effective rate $\downarrow$ ($\uparrow$) $\Rightarrow$ other short/long-term rates $\downarrow$ ($\uparrow$)

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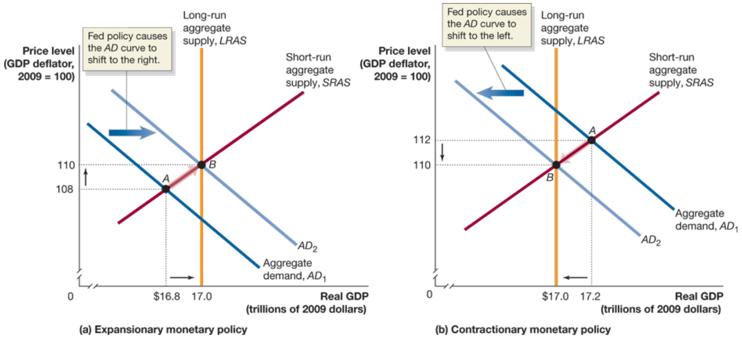
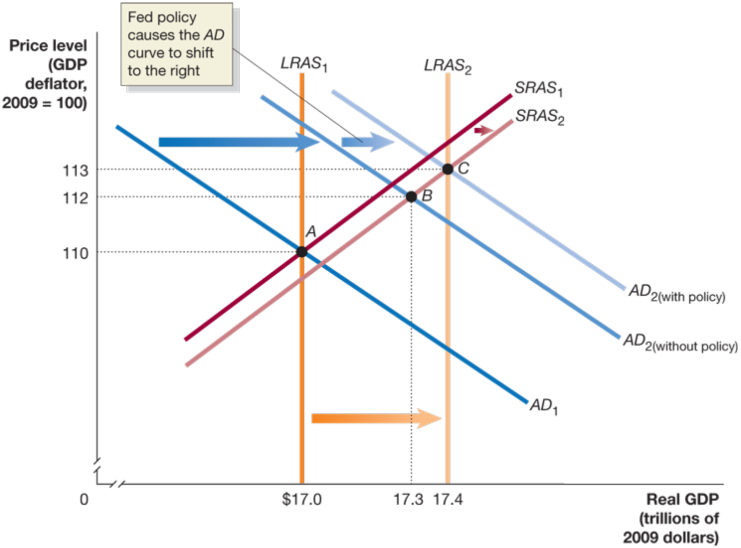
Effects of Monetary Policy



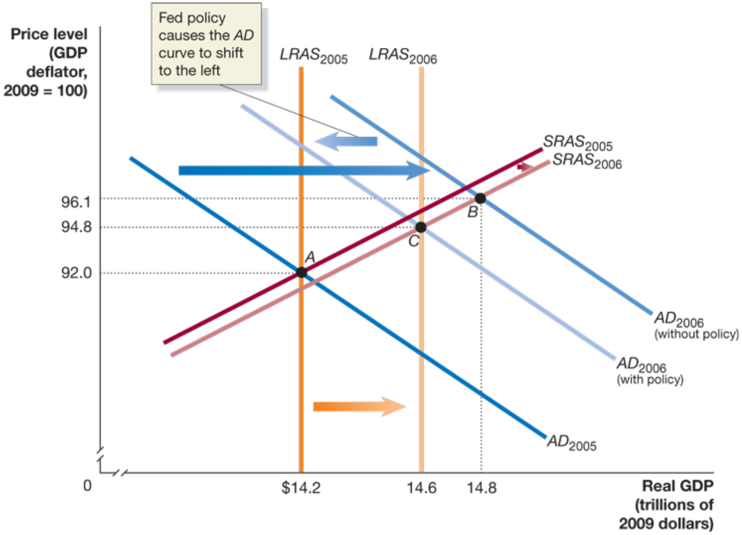
- Expansionary (contractionary) monetary policy
  - $i \downarrow (\uparrow) \Rightarrow$ borrowing cost $\downarrow (\uparrow) \Rightarrow C, I \uparrow (\downarrow)$
  - $i \downarrow (\uparrow) \Rightarrow$ \$ depreciates (appreciates) $\Rightarrow NX \uparrow (\downarrow)$
- AD curve shifts to right (left)

Effects of Monetary Policy (Cont'd)



- Expansionary/loose monetary policy to fight recession

Effects of Monetary Policy (Cont'd)



- Contractionary/tight monetary policy to fight inflation

Monetary Policy Rule

Taylor rule

$$i_t^* = r_n + \pi_t + a(\pi_t - \pi^*) - b(u_t - u_n)$$

$$\Rightarrow \quad i_t^* = r_n + \pi^* + (a+1)(\pi_t - \pi^*) - b(u_t - u_n)$$

- Some remarks
  - suggested by John Taylor for setting target rate i_t^*
  - r_n: natural real rate, consistent w/ potential GDP
  - $\pi_t - \pi^*$: gap b/w inflation and target
  - $u_t - u_n$: gap b/w unemployment and natural rate
  - counter-cyclical policy: $a > 0$ and $b > 0$
  - Taylor principle: $\pi_t \uparrow \Rightarrow i_t^* \uparrow$ more than one for one

Readings & Exercises

- Readings
  - HO: chapter 15
  - BJ: lecture 20 (supplementary)
- Exercises
  - HO: problem 1.2, 2.5, 3.6, 4.4, 4.5, D15.2
  - Write down Taylor rule and discuss how it explains implementation of monetary policy.