

Monetary policy decisions Money market Goods market Equilibrium Summary

Outline

- Monetary policy decisions
- Money market
- Goods market
- Equilibrium
- Summary

- Monetary policy decisions
- Money market

Monetary policy decisions

► Monetary policy decisions by the central bank encompass decisions on interest rates



Monetary policy decisions

► Monetary policy decisions by the central bank encompass decisions on interest rates and money supply



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- ► If money supply is increased, the price level should increase



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- However, prices will generally not adjust quickly



The effect of monetary shocks Slide 4 of 20

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The effect of monetary shocks Slide 4 of 20

Responses to changes in the money supply



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► Changing the money supply changes price levels if there is full employment as output is given



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- ▶ Real money demand depends on the interest rate
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Exchange rate change

▶ The equilibrium requires that exchange rates are stable, $\Delta e = 0$



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▶ Demand depends on the relative prices of goods, output, and interest rates

$$D = \left(\frac{eP^*}{P}\right) \quad Y \quad (1+r)$$

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▶ The equilibrium requires that prices are stable, $\Delta P = 0$, at some price level \overline{P} and exchange rate \overline{e}

Goods market 000

Inflation

From the money demand we have $r = \frac{\ln P - \ln M + \varepsilon_Y \ln Y}{\varepsilon}$

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Goods market 000

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Goods market

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Equilibrium

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- Equilibrium



Money market Goods market **Equilibrium** Sum

Relationship between price level and exchange rate

▶ The equilibrium requires that prices are stable, $\Delta P=0$, at some price level \overline{P} and exchange rate \overline{e}



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► The evolution of the exchange rate and price level is given by

$$\Delta e = \frac{\ln P - \ln \overline{P}}{\varepsilon_r}$$

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$$\ln e - \ln \overline{e} = \frac{\xi + \lambda \left(\hat{\varepsilon}_P - \frac{\hat{\varepsilon}_r}{\varepsilon_r}\right)}{\hat{\varepsilon}_P} \left(\ln P - \ln \overline{P}\right)$$

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The adjustment towards the equilibrium has a negative slope

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The adjustment towards the equilibrium has a negative slope

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Impact of monetary policy



Impact of monetary policy

From the money demand we had $\ln \overline{P} - \ln M = \varepsilon_r r^* - \varepsilon_Y \ln Y$

Impact of monetary policy

- From the money demand we had $\ln \overline{P} \ln M = \varepsilon_r r^* \varepsilon_Y \ln Y$
- An increase in the money supply will increase the price level due to the output being given

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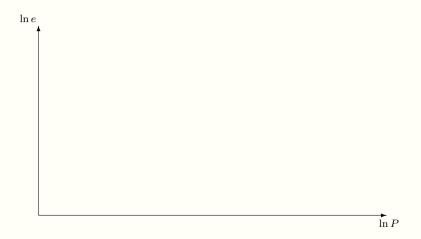
Impact of monetary policy

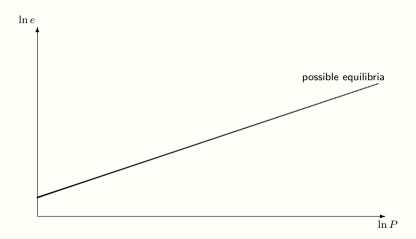
- From the money demand we had $\ln \overline{P} \ln M = \varepsilon_r r^* \varepsilon_Y \ln Y$
- An increase in the money supply will increase the price level due to the output being given
- ► From the relationship of exchange rates and price levels in equilibrium, this implies a higher exchange rate

Impact of monetary policy

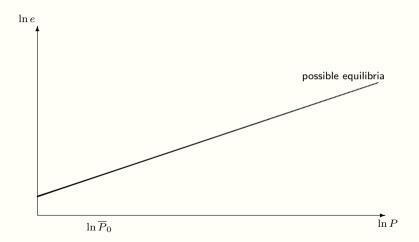
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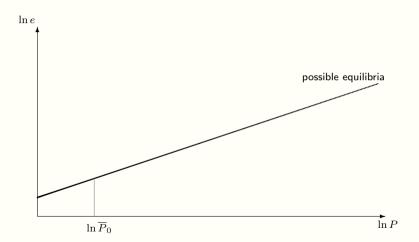






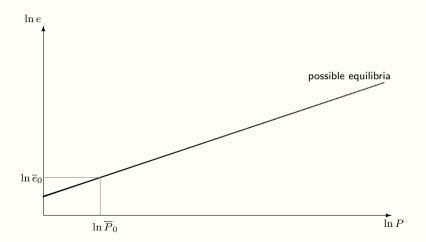






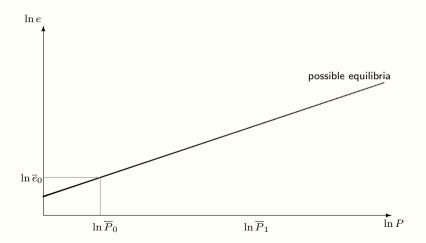


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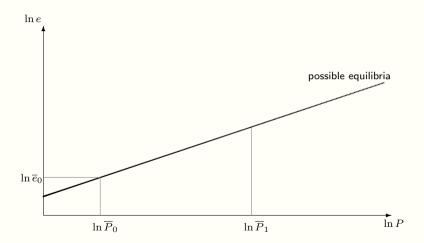




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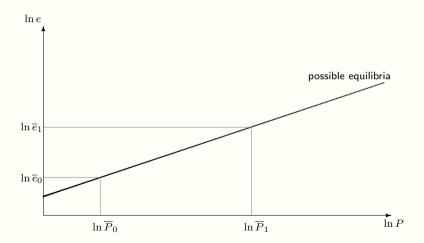




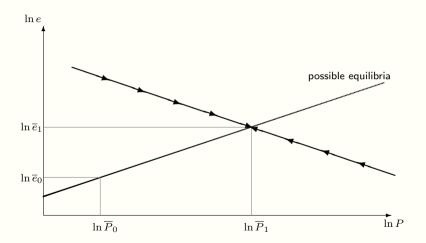


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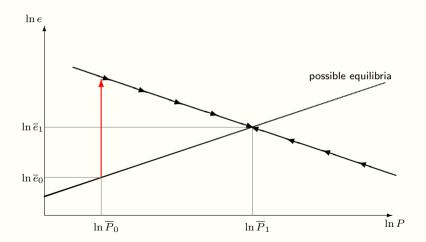
Reaction to an increase in money supply



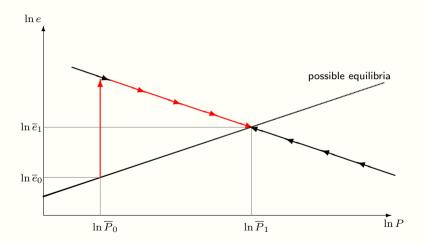








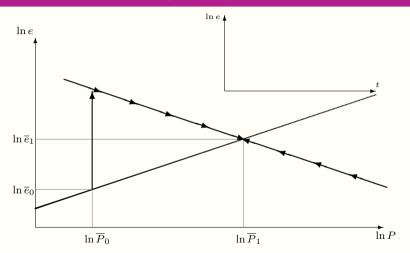




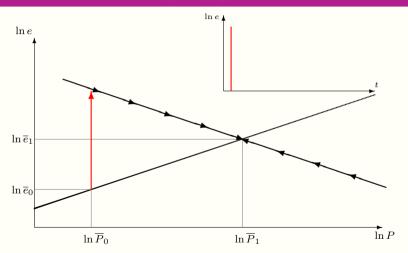


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Reaction to an increase in money supply

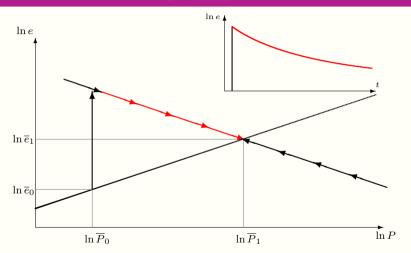


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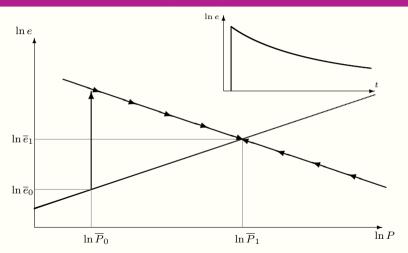


Reaction to an increase in money supply



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Reaction to an increase in money supply



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Overshooting exchange rates

► The exchange rate will adjust quickly to its new equilibrium path



- ► The exchange rate will adjust quickly to its new equilibrium path
- As price levels adjust slowly, the exchange rate then adjusts slowly towards its equilibrium

 flonetary policy decisions
 Money market
 Goods market
 Equilibrium
 Summary

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- ▶ The exchange rate will adjust quickly to its new equilibrium path
- As price levels adjust slowly, the exchange rate then adjusts slowly towards its equilibrium
- ► The exchange rate initially overshoots the equilibrium exchange rate and then slowly falls back

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- Monetary policy decisions
- Money market

- Summary

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Sticky prices

▶ Price levels only adjust slowly to changes in the money supply



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Exchange rates over-adjust



Summary

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Exchange rates over-adjust

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