

Lecture 5:  
Money and Output  
Reading: Chap25, 26

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Chapter 25

Aggregate Demand  
and Aggregate  
Supply

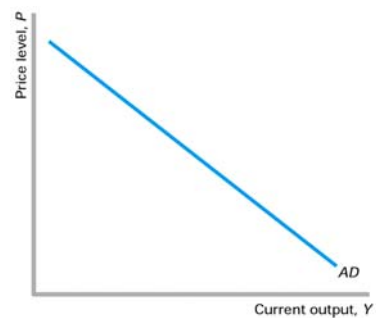
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Aggregate Demand

- Aggregate demand for current output,  $Y_d$ , is:  $Y_d = C + I + G + NX$ .
- The aggregate demand curve shows the output demanded at each price level.
- The  $AD$  curve slopes downward because an increase in the price level reduces the aggregate demand for output.

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Figure 25.1 **Aggregate Demand Curve**



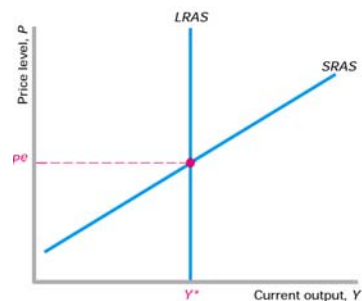
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Aggregate Supply

- The aggregate supply curve shows the output supplied at each price level.
- Most economists believe that the short-run aggregate supply curve slopes upward.
- The long-run aggregate supply curve is vertical at  $Y^*$ .
- The  $LRAS$  shifts over time to reflect growth in the full-employment level of output.

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Figure 25.2 **The Short-Run and Long-Run Aggregate Supply Curves**



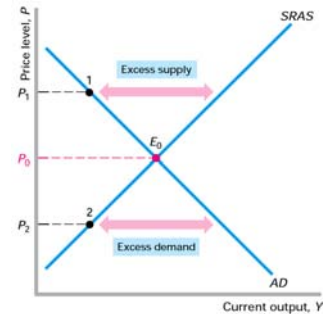
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## Equilibrium

- The short-run equilibrium occurs at the intersection of the  $AD$  and  $SRAS$  curves.
- In the long run the price level adjusts and output returns to  $Y^*$ .
- The real business cycle view argues short-term output changes due to productivity shocks.

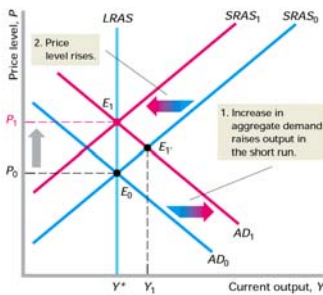
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### Figure 25.3 Short-Run Equilibrium



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### Figure 25.4 Adjustment to Long-Run Equilibrium



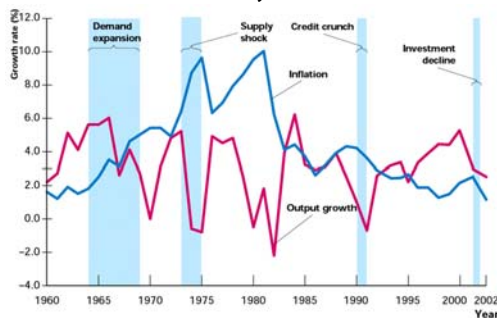
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## Economic Fluctuations in the United States

- From 1964-1969: Expansionary monetary and fiscal policies caused  $AD$  to shift right.
- From 1973-1975: A supply shock resulted in  $SRAS$  shifting up and to the left.
- 1990-1991: A credit crunch, shifting  $AD$  to the left, which resulted in  $SRAS$  shifting down and to the right.

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### Figure 25.6 Output Growth and Inflation, 1960-2002



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## Chapter 26

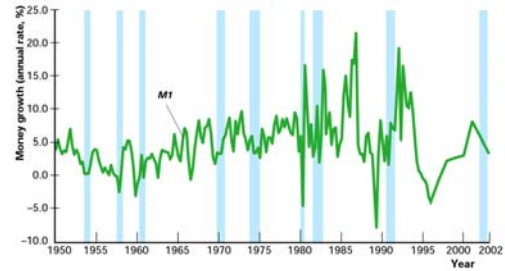
### Money and Output in the Short Run

## Tracking Money and Output Movements in the Short Run

- Through the **business cycle**, money and output fluctuate.
- Movements in the growth rate of the money supply are procyclical.
- Monetary expansions (contractions) tend to precede business cycle peaks (troughs).
- Economists debate whether money causes output changes or vice versa.

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Figure 26.1 Money Supply Growth and the Business Cycle, 1950-2002



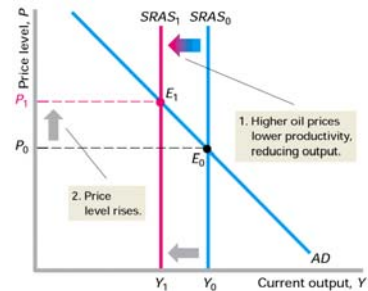
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## The Real Business Cycle Model

- The real business cycle model holds that money supply changes have no effect on output.
- Real business cycle advocates believe in reverse causation.
- Contrary to the real business cycle model, money appears to affect output in the short run.

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Figure 25.5 Short-Run Results in the Real Business Cycle Model



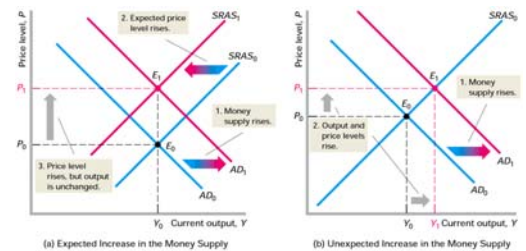
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## Money and Output: The New Classical Model

- New classical view: output increases when the price level is higher than expected.
- Expected money changes in the money supply change the expected price level.
- Only unexpected changes in the money supply affect real output in this model.
- Evidence shows that expected and unexpected money supply changes affect current output.

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Figure 26.2 Money and Output: The New Classical Model Diagram



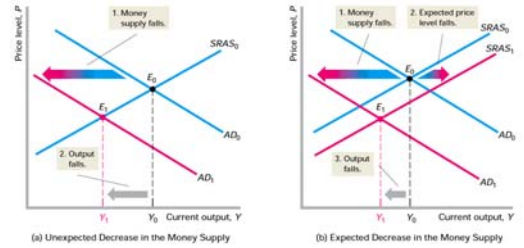
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## Money and Output: The New Keynesian Model

- New Keynesian economists argue that prices are not completely flexible.
- New Keynesians believe prices are sticky due to contracts and imperfect competition.
- Expected and unexpected money supply changes affect output in the short run in this model.

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Figure 26.3 **Money and Output:  
The New Keynesian Model Diagram**



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## Should Public Policy Stabilize Economic Fluctuations?

- Stabilization policies attempt to shift the *AD* curve with monetary or fiscal policy.
- Supporters of the real business cycle model place no value on stabilization policies.
- New classical economists recommend against stabilization policy.
- The new Keynesians believe there may be a role for stabilization policy.

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## Policymaking and Implementation Lags

- Data lag
- Recognition lag
- Legislative lag
- Implementation lag
- Impact lag

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Table 26.1 **Summary of  
Monetary Policy and Output**

Alternative	Is Current Output Affected by an . . .		
	Unexpected Change in the Money Supply?	Expected Change in the Money Supply?	Is Activist Policy Desirable?
Real business cycle model	No	No	No
New classical model	Yes	No	No
New Keynesian model	Yes	Yes	Rarely

Prices are perfectly flexible, so monetary policy cannot affect real money balances or output in the short run.

Only unexpected changes in the money supply affect output.

Monetary policy affects output and the real interest rate only by "fooling" households and firms.

Both unexpected and expected changes in the money supply affect output, although effects of unexpected changes are greater.

Frequent changes in monetary policy can reduce the credibility of the monetary authority.

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## Explaining Events of the 1980s, 1990s, and Early 2000s

- The macromodels share an emphasis on the importance of policy credibility.
- Between 1979 and 1983, the new Keynesian view predicted better than the new classical view.
- Both models suggest credibility problems were important in 1990-1992.
- Recent evidence supports the new Keynesian view.

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