

Aggregate Supply and Aggregate Demand

ECO 301: Money and Banking

Goals

1 / 19

- Specific Goals
 - Be able to explain GDP fluctuations when the price level is also flexible.
 - Explain how real GDP and the price level are related in the short run.
- Learning Objectives
 - LO9: Identify and analyze macroeconomic problems using graphical and computational models and prescribe appropriate monetary policy solutions.

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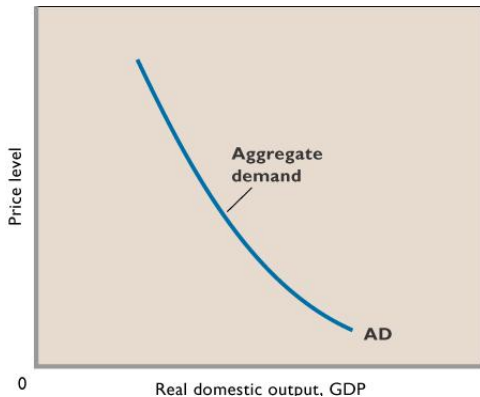
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2 / 19

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Aggregate Demand

3 / 19



Downward sloping AD

4 / 19

- **Real balances effect:** when the price level increases, the purchasing power of the consumers' accumulated savings balances decreases.
 - With a lower real savings balance, consumers decrease consumption.
- **Foreign purchases effect:** When the price level rises relative to the price level in foreign countries, the foreign demand for U.S. products decreases. Similarly, the demand for imports increases.
 - This causes exports to fall and imports to rise.

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Determinants of AD

5 / 19

- When something *besides the price level* affects the AD, this causes the AD curve to shift.
- The following affect *consumption* and therefore shift AD.
 - Consumer wealth: financial assets such as savings accounts, stocks, and bonds, and physical assets that consumers can borrow against like houses and land.
 - An increase in consumer wealth increases aggregate demand, causing AD to shift to the right.
 - Household indebtedness: if household debt increases, AD shifts to the left.
 - Taxes: Increase in taxes decreases consumption, AD shifts to the left.
 - Consumer expectations: expectations about future income or future taxes can shift AD.
 - Interest rate: an increase in the interest rate decreases consumption which shifts AD to the left.

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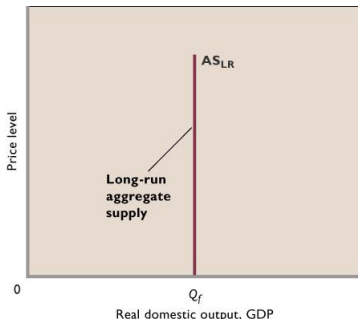
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Long run aggregate supply

7 / 19

Long run aggregate supply:
in the long run the economy
uses all factors of production
efficiently, therefore long run
aggregate supply is a vertical
line at **potential GDP**



Short run aggregate supply

8 / 19

- In the short run, factor markets are slow to adjust. Wages are slow to adjust and there may be unemployment or even excess employment.
- Therefore in the short run, the aggregate supply curve is upward sloping.
 - Increases in the price level without increasing wages create larger profits for firms, creating an incentive to produce more.

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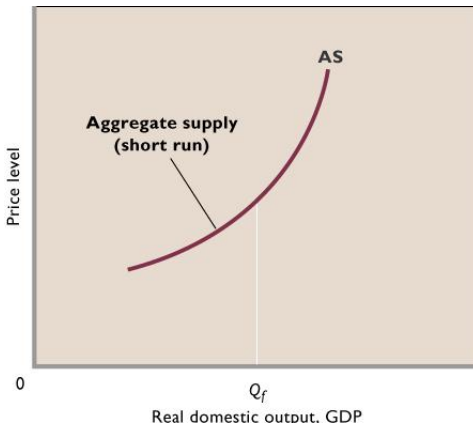
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9 / 19



Determinants of Short-Run AS

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- When something *besides the price level* affects AS, this shifts AS.
- Changes in costs of production
 - Prices of factors of production: when the price of labor, capital, or land increase, this shifts AS to the left.
 - Business taxes can affect output decisions of firms and shift AS.
 - Other government regulation.
- Technology: an increase in technology shifts AS to the right.
 - Also shifts LRAS (*long-run AS*) right

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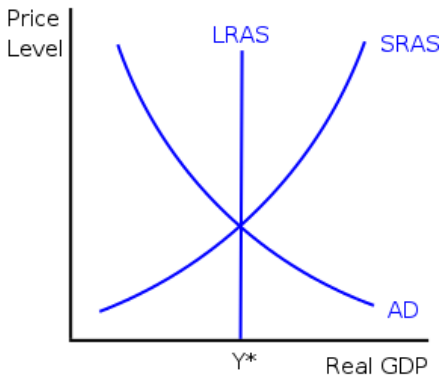
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Equilibrium

In equilibrium, real GDP and the price level are determined by the intersection of AS and AD



Inflation

12 / 19

- Inflation can come from two sources, excess demand or increases in production costs.
- **Demand pull inflation:** when increases in demand cause inflation.
- **Cost push inflation:** when increases in production cost cause inflation.

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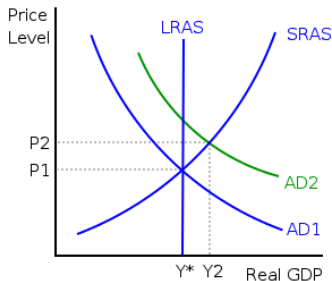
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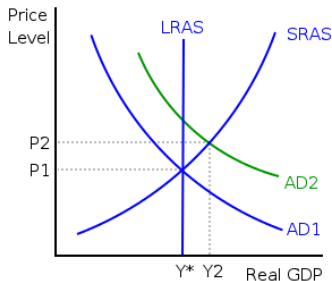
13 / 19

- Demand pull inflation begins when AD increases.
- Causes real GDP to increase and the price level to rise.
- Recall: **inflationary gap**: when aggregate expenditures is equal to real GDP above potential GDP.



Demand pull inflation

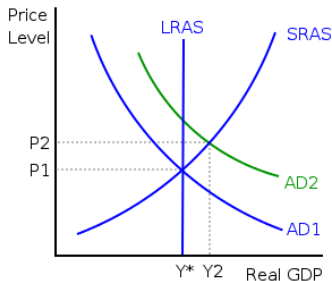
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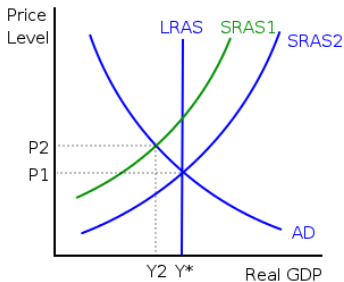
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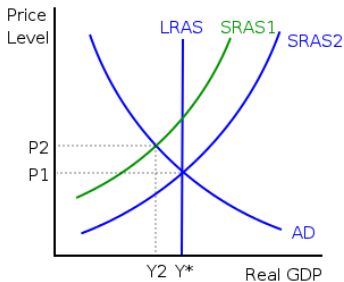
Cost push inflation

- Cost-push inflation begins when an increase in production cost shifts SRAS to the left.
- Causes real GDP to fall and price level to rise.
- **Stagflation**: when there is unemployment and high inflation at the same time.



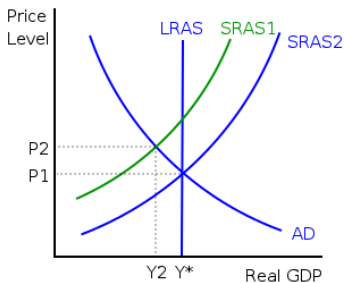
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Long-run equilibrium

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- Suppose AD shifts to the right.
- Firms will be able to sell more goods. Firms hire more labor and produce more goods.
- Per-unit labor costs do not increase (wages are fixed in the short run).
- In the long run, there is an excess demand for labor, wages will increase.
- Increase in wages shifts the SRAS curve to the left.

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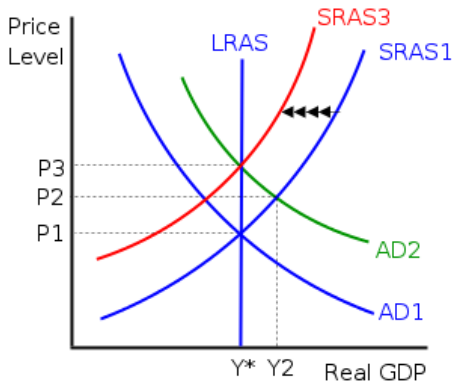
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Long-run equilibrium



Ripple effects of the interest rate

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The Fed has recently lowered the Federal Funds rate to between 0% and 0.25%.

- 1 Investment increases.
- 2 Consumption increases.
- 3 Net exports increase.

4 Multiplier effect What happens in the goods market?

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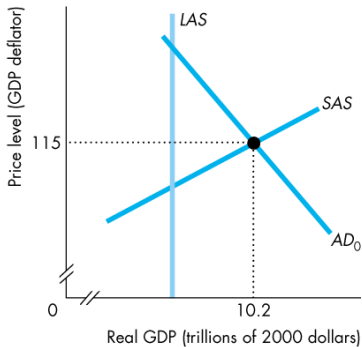
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Controlling the inflation rate

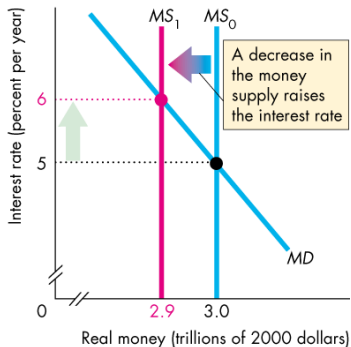


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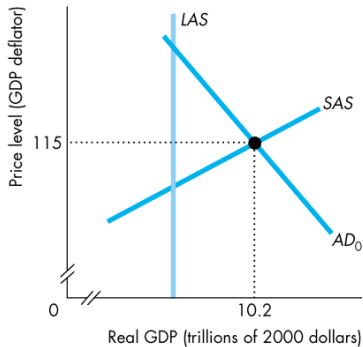


(c) Real GDP and the price level

Controlling the inflation rate

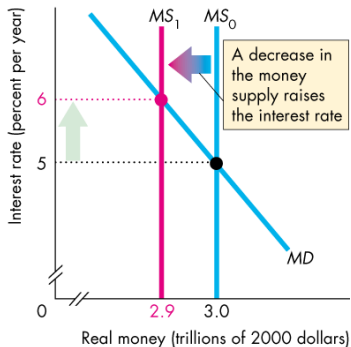


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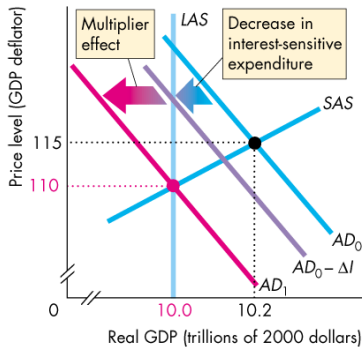


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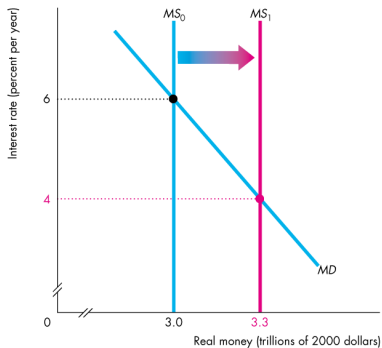


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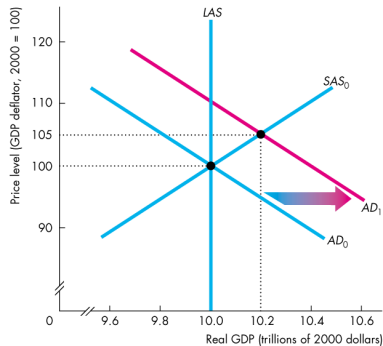


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Increase in money supply

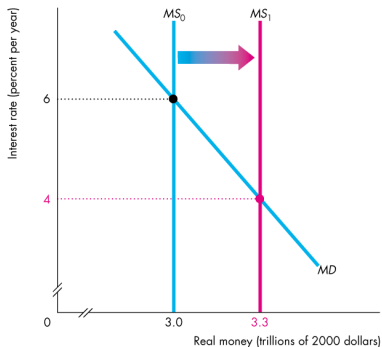


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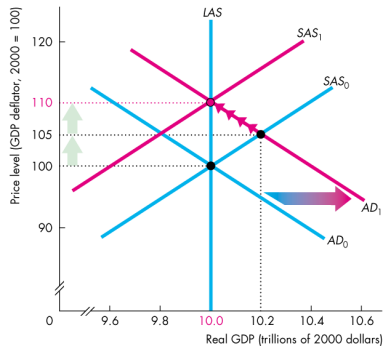


(b) AS-AD

Increase in money supply

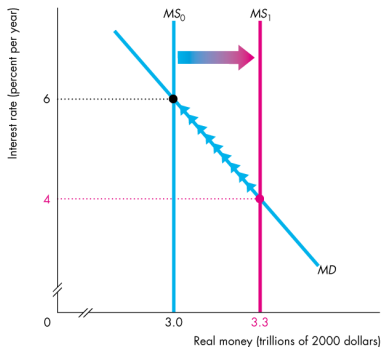


(a) Money market

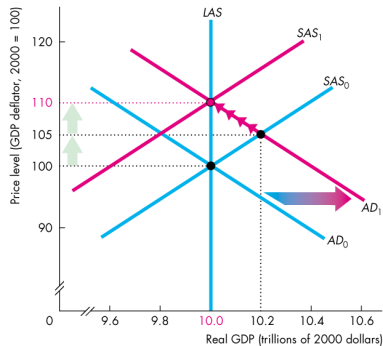


(b) AS-AD

Increase in money supply



(a) Money market



(b) AS-AD