

### W12a: Business Cycles

1. Define business cycles
2. How do business cycles work?
3. Inflation and its relation to the business cycle:
  - *Inflation cycles*
  - *Demand-pull inflation*
  - *Cost-push inflation*
  - *Expected inflation*

**Reading: CH12: pg.296-97, skip RBC, pg.301-09, skip the parts about quantity theory of money**

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### What Is Business Cycle?



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### US Business Cycle Expansions and Contractions

- Contractions (recessions) start at the peak of a business cycle and end at the trough
- Expansions start at the trough of a business cycle and end at the peak
- Cycle:
  1. Trough from previous trough or
  2. Peak from previous peak

<http://www.nber.org/cycles.html>

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### Mainstream Business Cycle Theory

- Potential GDP grows at a steady pace
- Aggregate demand grows at a fluctuating rate
- Real GDP fluctuates around potential GDP

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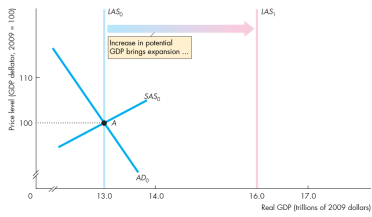
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### The Business Cycle

Potential GDP increases to \$16 trillion and the *LAS* curve shifts rightward.




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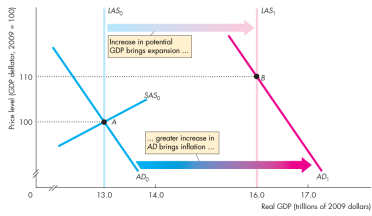
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### The Business Cycle

During an expansion, aggregate demand increases and usually by more than potential GDP.

The *AD* curve shifts to *AD*<sub>1</sub>.




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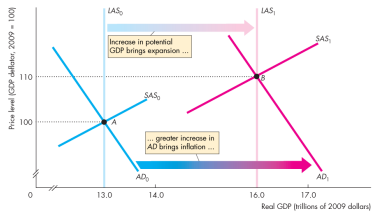
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### The Business Cycle

The SAS shifts to SAS<sub>1</sub>.




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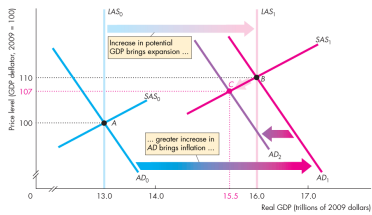
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### The Business Cycle

But if aggregate demand increases more slowly than potential GDP, the AD curve shifts to AD<sub>2</sub>.




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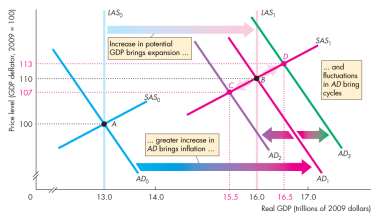
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### The Business Cycle

But if aggregate demand increases more quickly than potential GDP, the AD curve shifts to AD<sub>3</sub>.




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### Inflation Cycles

- In the long run, inflation occurs if the quantity of money grows faster than potential GDP
- In the short run, many factors can start an inflation, and real GDP and the price level interact
- To study these interactions, we distinguish between two sources of inflation:
  - Demand-pull inflation
  - Cost-push inflation

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### Demand-Pull Inflation

An inflation that starts because aggregate demand increases

Examples:

- a cut in the interest rate
- an increase in the quantity of money
- an increase in government expenditure
- a tax cut
- an increase in investment stimulated by an increase in expected future profits

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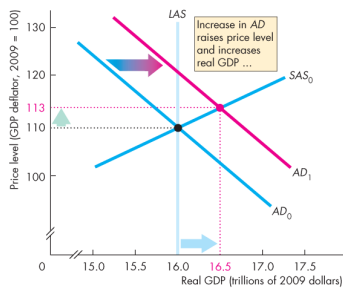
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### Demand-Pull Inflation



(a) Initial effect

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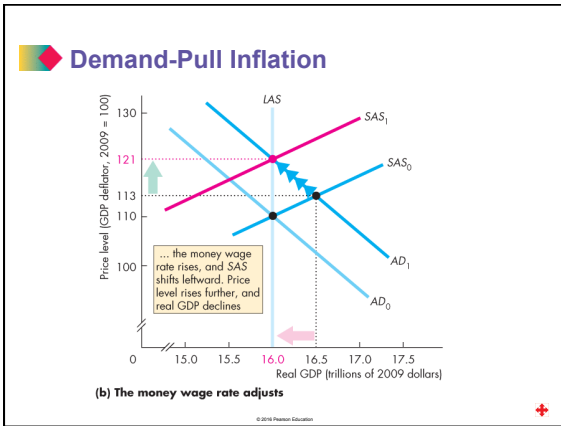
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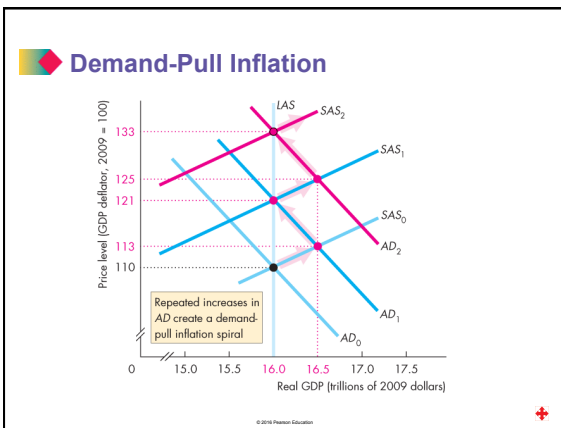
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### Cost-Push Inflation

An inflation that starts with an increase in costs

Two main sources of increased costs:

1. An increase in the money wage rate
2. An increase in the money price of raw materials, such as oil

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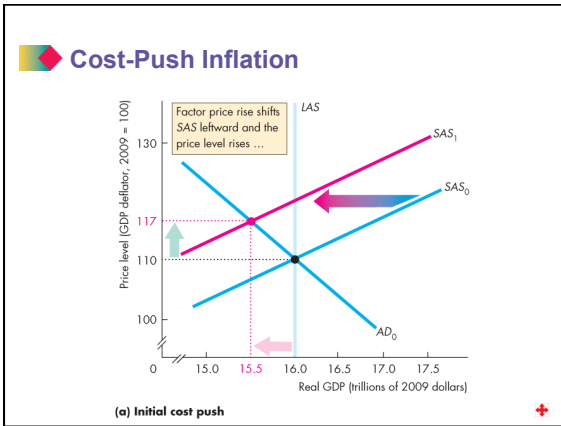
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- ### Cost-Push Inflation
- The initial increase in costs creates a *one-time* rise in the price level, not inflation
  - To create inflation, aggregate demand must increase
  - That is, the Fed must increase the quantity of money persistently
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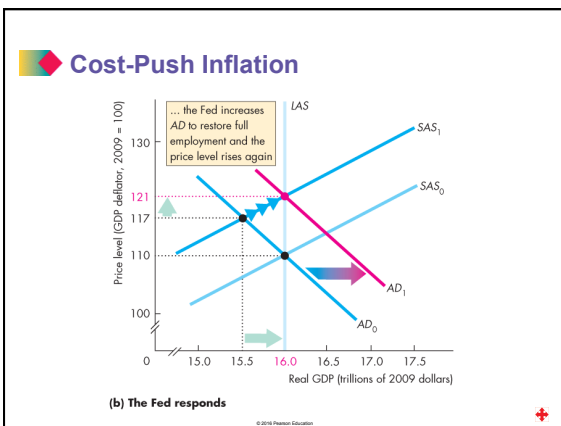
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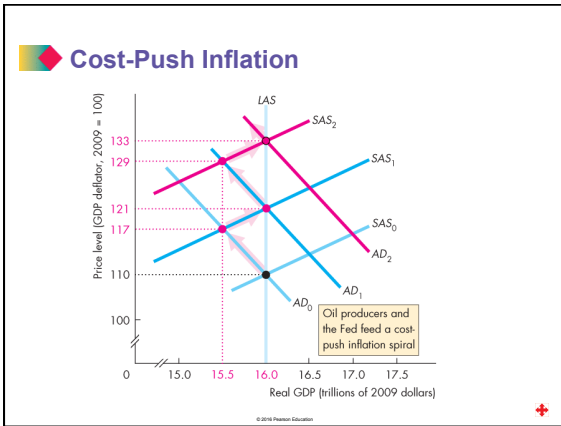
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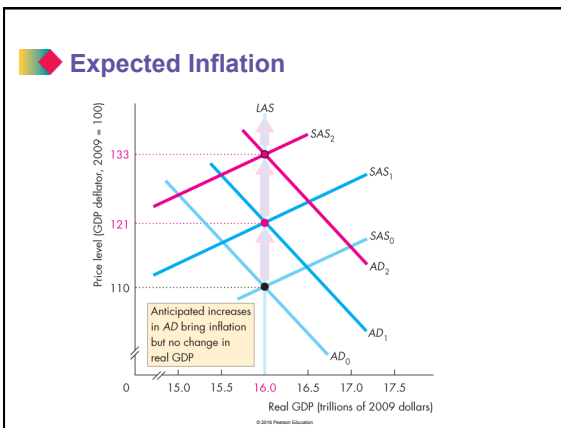
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- ### Expected Inflation
- To expect inflation, people must forecast it
  - The best forecast available is one that is based on all the relevant information and is called a **rational expectation**
  - A rational expectation is not necessarily correct, but it is the best available

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 **Inflation and Business Cycle**

- When the inflation forecast is *correct*, the economy operates at full employment
- If aggregate demand grows *faster* than expected, real GDP moves above potential GDP, the inflation rate exceeds its expected rate, and the economy behaves like it does in a demand-pull inflation
- If aggregate demand grows *more slowly* than expected, real GDP falls below potential GDP, the inflation rate slows, and the economy behaves like it does in a cost-push inflation

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 **W12b: Money**

1. Define money and describe its functions
2. Define a depository institution
3. Explain the economic functions of banks

**Reading: Ch 8, pages 182-188**

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 **What is Money?**

**Money** is any commodity or token that is generally acceptable as a means of payment

*Money has three other functions:*

- Medium of exchange
- Unit of account
- Store of value

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 **Functions of Money**

**Medium of Exchange**  
A *medium of exchange* is an object that is generally accepted in exchange for goods and services

In the absence of money, people would need to exchange goods and services directly, which is called **barter**

Barter requires a double coincidence of wants, which is rare, so barter is costly

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 **Functions of Money**

**Unit of Account**  
A *unit of account* is an agreed measure for stating the prices of goods and services

**Store of Value**  
As a *store of value*, money can be held for a time and later exchanged for goods and services

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 **Money in The U.S. Today**

*Consists of:*

- **Currency** – the notes and coins held by individuals and businesses
- **Deposits** at banks and other depository institutions

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### Measures of Money

The two main official measures of money in the United States are M1 and M2

**M1:**

1. currency
2. traveler's checks
3. checking deposits owned by individuals and businesses

**M2:**

1. M1
2. time deposits
3. saving deposits
4. money market mutual funds
5. and other deposits

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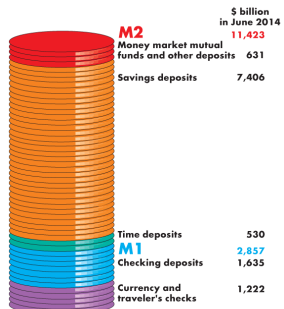
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### What is Money?



Two Measures of Money

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### Are M1 and M2 Really Money?

All the items in M1 are means of payment, so they are *money*

Some saving deposits in M2 are not means of payments — they are called liquid assets

**Liquidity** is the property of being instantly convertible into a means of payment with little loss of value

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 **What is Money**

**Are checks money?**

- A **check** is an instruction to a bank to transfer money
- The deposit on which a check is written is money

**Are credit cards money?**

- A credit card enables the holder to obtain a loan
- It must be repaid with money

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 **Depository Institutions**

A **depository institution** is a firm that takes deposits from households and firms and makes loans to other households and firms

**Types of Depository Institutions**

- Commercial banks
- Thrift institutions
- Money market mutual funds

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 **Types of Depository Institutions**

**Commercial Banks**

Private firms that are licensed by the Comptroller of the Currency or by a state agency to receive deposits and make loans

**Thrift Institutions**

Savings and loan associations, savings banks, and credit unions

**Money Market Mutual Funds**

A money market mutual fund is a fund operated by a financial institution that sells shares in the fund and holds assets such as U.S. Treasury bills

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 **What Do Depository Institutions Do?**

The goal of any bank is to maximize the wealth of its owners

To achieve this objective, the interest rate at which it lends exceeds the interest rate it pays on deposits

But the banks must balance profit and prudence:

- Loans generate profit
- Depositors must be able to obtain their funds when they want them

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 **What Do Depository Institutions Do?**

*A commercial bank puts the depositors' funds into:*

- **Cash assets** – notes and coins in its vault or its deposit at the Federal Reserve
- **Securities** – U.S. government Treasury bills and commercial bills and longer-term U.S. government bonds and other bonds such as mortgage-backed securities
- **Loans** – commitments of fixed amounts of money for agreed-upon periods of time

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 **What Do Depository Institutions Do?**

**TABLE 8.2** Commercial Banks: Sources and Uses of Funds

	Funds (billions of dollars)	Percentage of deposits
<b>Total funds</b>	14,662	144.3
<b>Sources</b>		
Deposits	10,161	100.0
Borrowing	1,698	16.7
Own capital and other sources (net)	2,803	27.6
<b>Uses</b>		
Cash Assets	2,850	28.0
Securities	2,809	27.6
Loans	7,666	75.4
Other assets	1,337	13.2

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### Economic Benefits Provided by Depository Institutions

- Create liquidity
- Pool risk
- Lower the cost of borrowing
- Lower the cost of monitoring borrowers

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### Regulation of Depository Institutions

- Depository institutions are required to hold levels of reserves and owners' capital equal to or that surpass the ratios laid down by regulation
- If a depository institution fails, deposits are guaranteed up to \$250,000 per depositor per bank by the **FDIC** – Federal Deposit Insurance Corporation

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