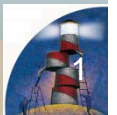




Chapter 7

ECON4 William A. McEachern

Unemployment *and* Inflation





Unemployment

- Unemployment
 - Personal cost
 - Cost on the economy
- Measuring unemployment
 - Civilian non-institutional adult population
 - Labor force
 - Employed + Unemployed
 - Unemployment rate
 - Percentage of unemployed in the labor force





Unemployment

- Civilian non-institutional adult population
 - All civilians 16 years of age and older
 - Except those in prison, in mental facilities, or in homes for the aged
- Labor force
 - Those 16 years of age and older
 - Working or looking for work
- Civilian population
 - Not in the military





Unemployment

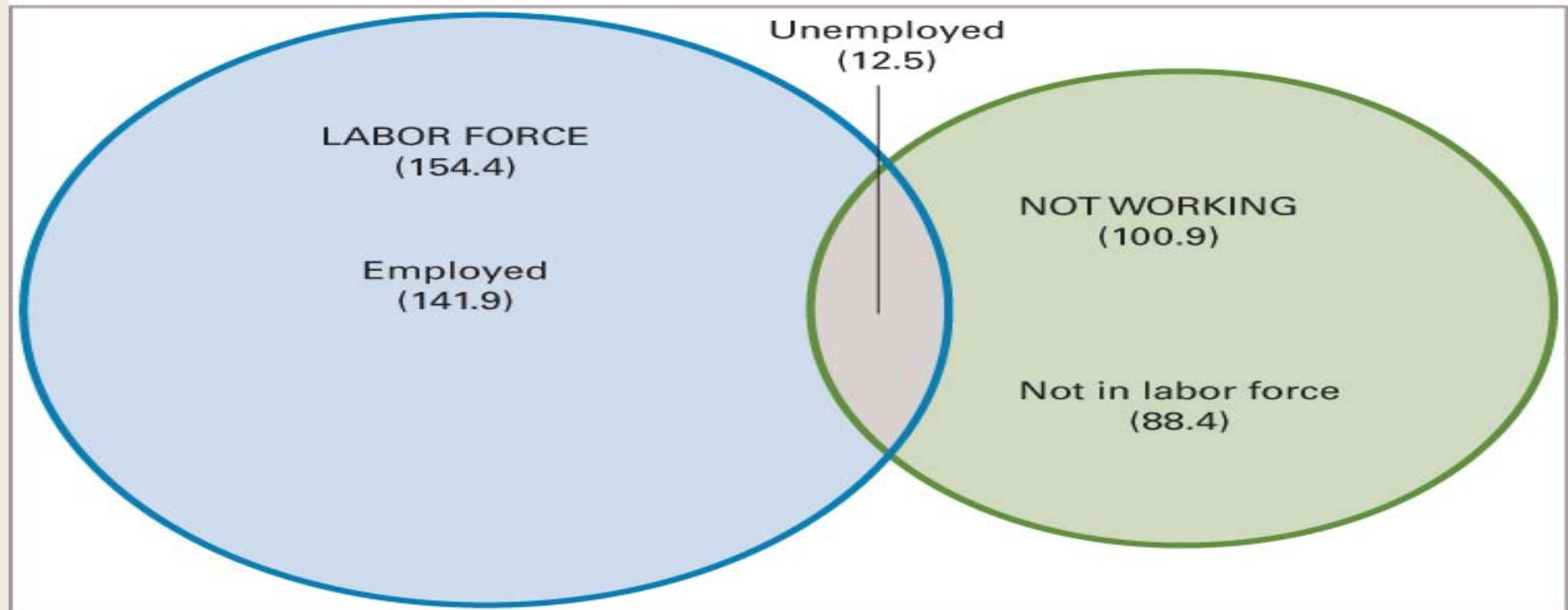
- Adult population
 - Employed
 - Working full time or part time
 - Not working
 - Unemployed (looking for work)
 - Not in labor force
 - Retired; Students; Don't want to work
 - Discouraged workers



Exhibit 1 The Adult Population = the Employed, Unemployed, and Those Not in the Labor Force: 4/2014 (millions)

Exhibit 1

The Adult Population Sums the Employed, the Unemployed, and Those Not in the Labor Force: April 2012 (in millions)



SOURCE: Figures are for April 2012 from the U.S. Bureau of Labor Statistics. For the latest data, go to <http://www.bls.gov/news.release/empsit.toc.htm>.

The labor force, depicted by the left circle, consists of those employed plus those unemployed. Those not working, depicted by the right circle, consists of those not in the labor force and those unemployed. The adult population sums the employed, the unemployed, and those not in the labor force.



Unemployment

- Unemployment rate
 - Number unemployed as a percentage of the labor force
- Discouraged workers
 - Drop out of the labor force in frustration because they can't find work





Unemployment

- Labor force participation rate
 - Labor force as percentage of adult population
- Unemployment over time
 - Rise during contractions
 - Fall during expansions
 - 1980s to 2000: Overall downward trend
 - Growing economy
 - Fewer teenagers in workforce





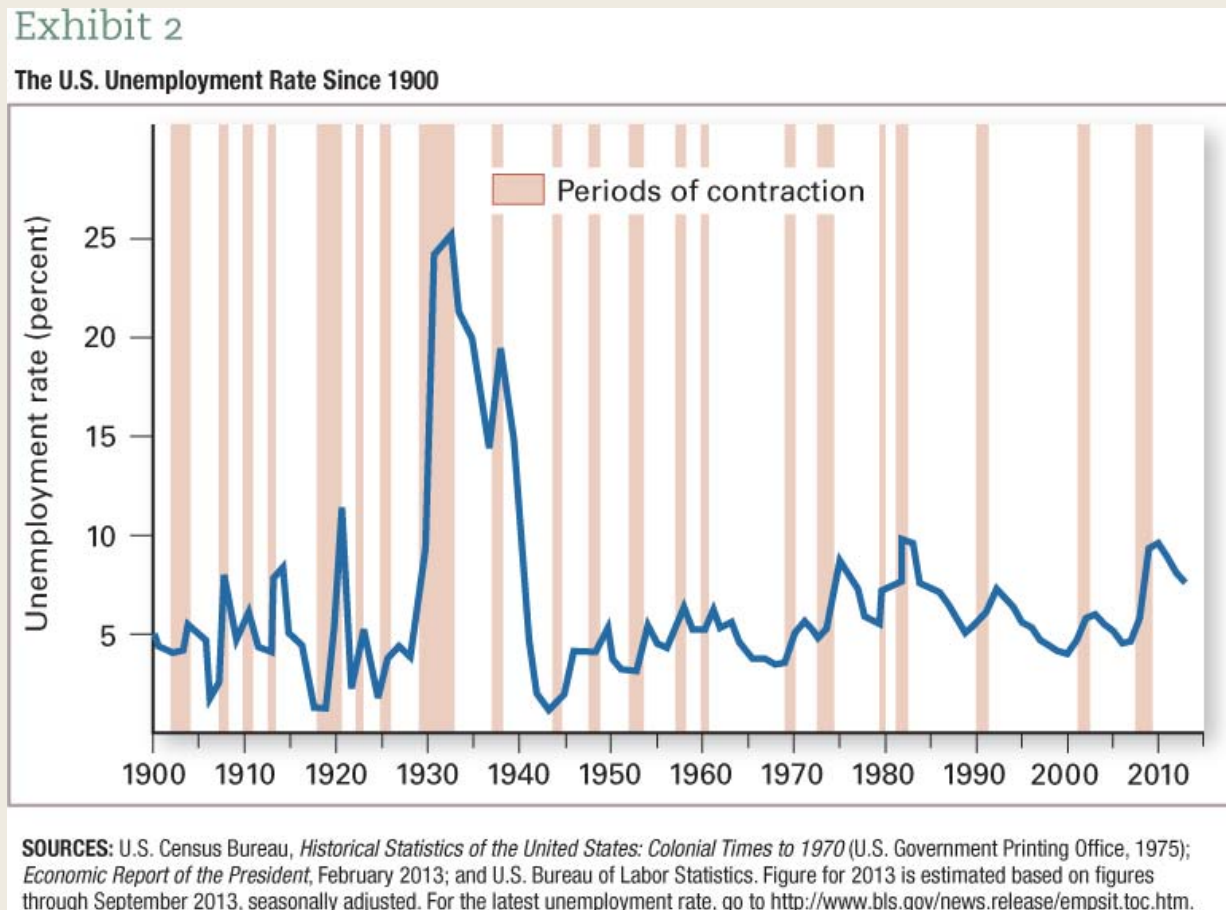
Unemployment

- Unemployment over time
 - 2000 to 2010: Overall upward trend
 - Recession of 2001
 - Sharper recession of 2008-2009
 - Slower job creation
 - Number of unemployed
 - 6 million in 2000
 - 15 million in 2010
 - Unemployment rate
 - Increased from 4 to 10%



Exhibit 2

The U.S. Unemployment Rate Since 1900



Since 1900, the unemployment rate has fluctuated widely, rising during contractions and falling during expansions. During the Great Depression of the 1930s, the rate spiked to 25 percent.



Unemployment

- Unemployment in various groups
 - More education
 - Lower unemployment
 - Age
 - Higher unemployment among teenagers
 - Race and ethnicity
 - Lower unemployment among white workers
 - Gender
 - Lower unemployment rate for women

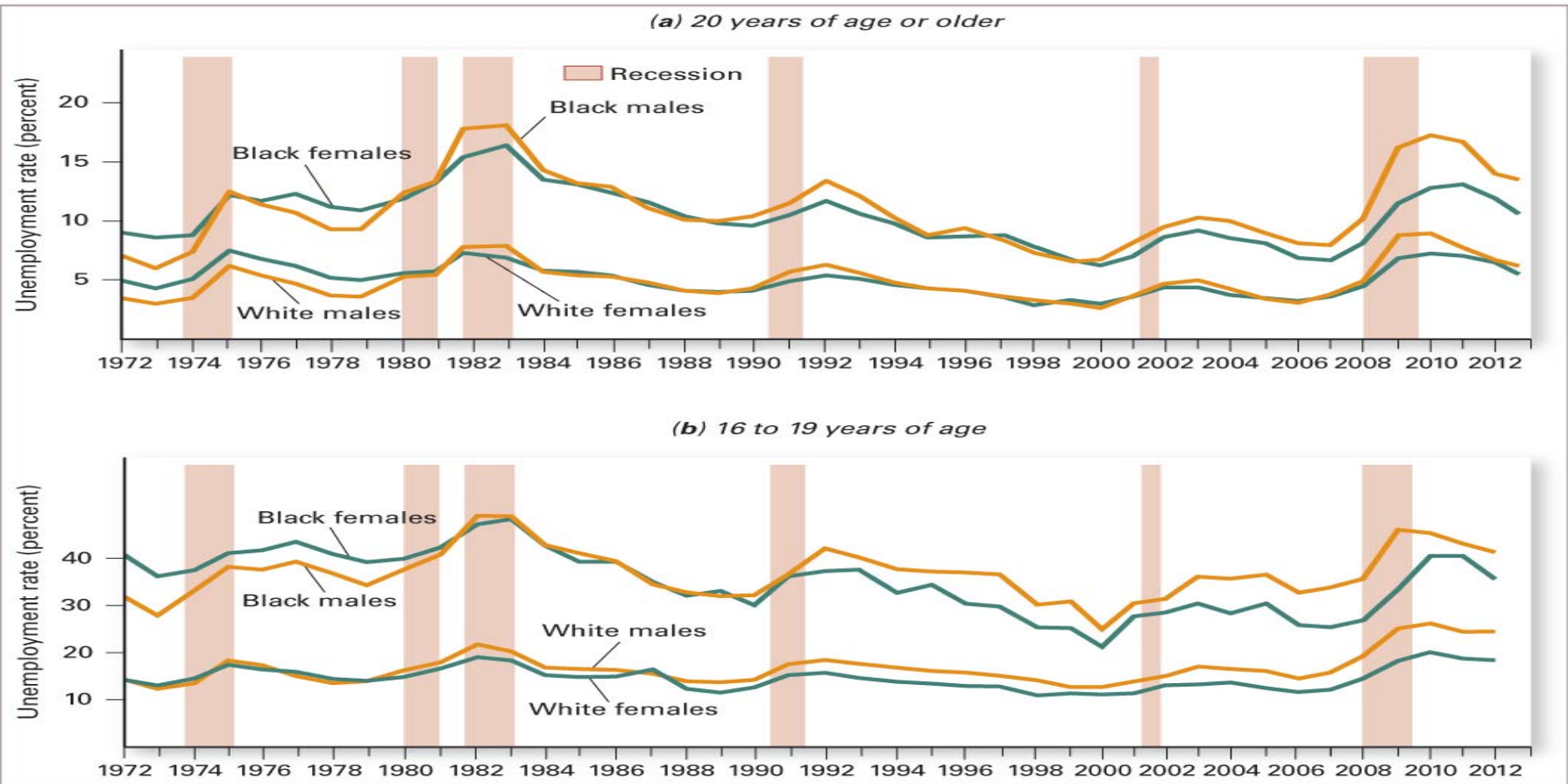


Exhibit 3

Unemployment Rates for Various Groups (a)

Exhibit 3

Unemployment Rates for Various Groups



SOURCE: *Economic Report of the President*, February 2013, Table B-43; and U.S. Bureau of Labor Statistics. For the latest data, go to <http://www.bls.gov/news.release/empstoc.htm>.

Different groups face different unemployment rates. The unemployment rate is higher for black workers than for white and higher for teenagers than for those 20 and older.



Unemployment

- Varies by occupation
 - Blue-collar workers
 - Higher unemployment rates
 - Professional and technical workers
 - Lower unemployment rates
 - Construction workers
 - High unemployment rates at times
 - Seasonal and subject to wide swings over the business cycle



Unemployment

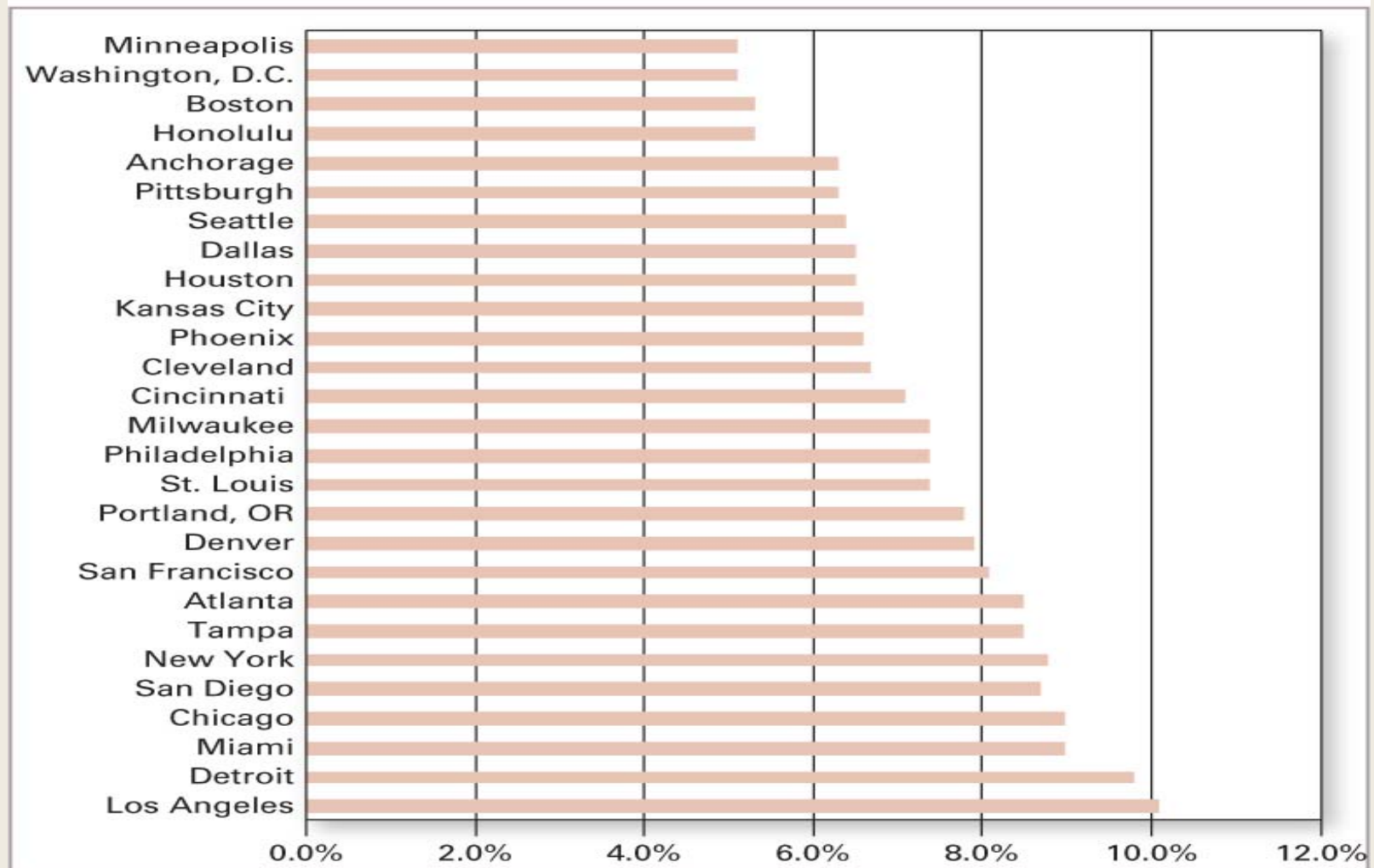
- Varies across regions
 - Certain occupations dominate labor markets in certain regions
 - Even within a state
- National unemployment rate
 - Masks differences across the country
 - Masks differences across an individual state

Exhibit 4

Unemployment Rates Differ Across U.S. Metropolitan Areas

Exhibit 4

Unemployment Rates Differ Across U.S. Metropolitan Areas



SOURCE: Based on figures for April 2012 from the U.S. Bureau of Labor Statistics. For the latest figures, go to <http://www.bls.gov/lau/home.htm>.



Sources of Unemployment

- Frictional unemployment
 - Bring together employers and job seekers
 - Doesn't last long
 - Better match workers and jobs
- Seasonal unemployment
 - Seasonal changes in labor demand



Sources of Unemployment

- Structural unemployment
 - Mismatch of skills or geographic location
 - Occurs because changes in tastes, technology, taxes, and competition
 - Reduce the demand for certain skills
 - Increase the demand for other skills
- Cyclical unemployment
 - Increases during recessions
 - Decreases during expansions



Sources of Unemployment

- Duration of unemployment
 - April 2012, unemployment rate = 8.1%
 - Average duration of unemployment = 33 weeks
 - 18% - unemployed less than 5 weeks
 - 20% - unemployed 5–14 weeks
 - 16% - unemployed 15–26 weeks
 - 46% - unemployed 27 weeks or longer
- Long-term unemployed
 - Those out of work for 27 weeks or longer





Full Employment

- Full employment
 - No cyclical unemployment
 - Some unemployment
 - Frictional
 - Structural
 - Seasonal
 - Estimates: 4-6%



Unemployment Compensation

- Unemployment benefits
 - Half of the unemployed
 - Criteria
 - Lost job and looking for work
 - Time limit: 6 months
 - Longer during recessions
 - 50% of take-home pay
 - May reduce the incentive to find work



International Comparisons

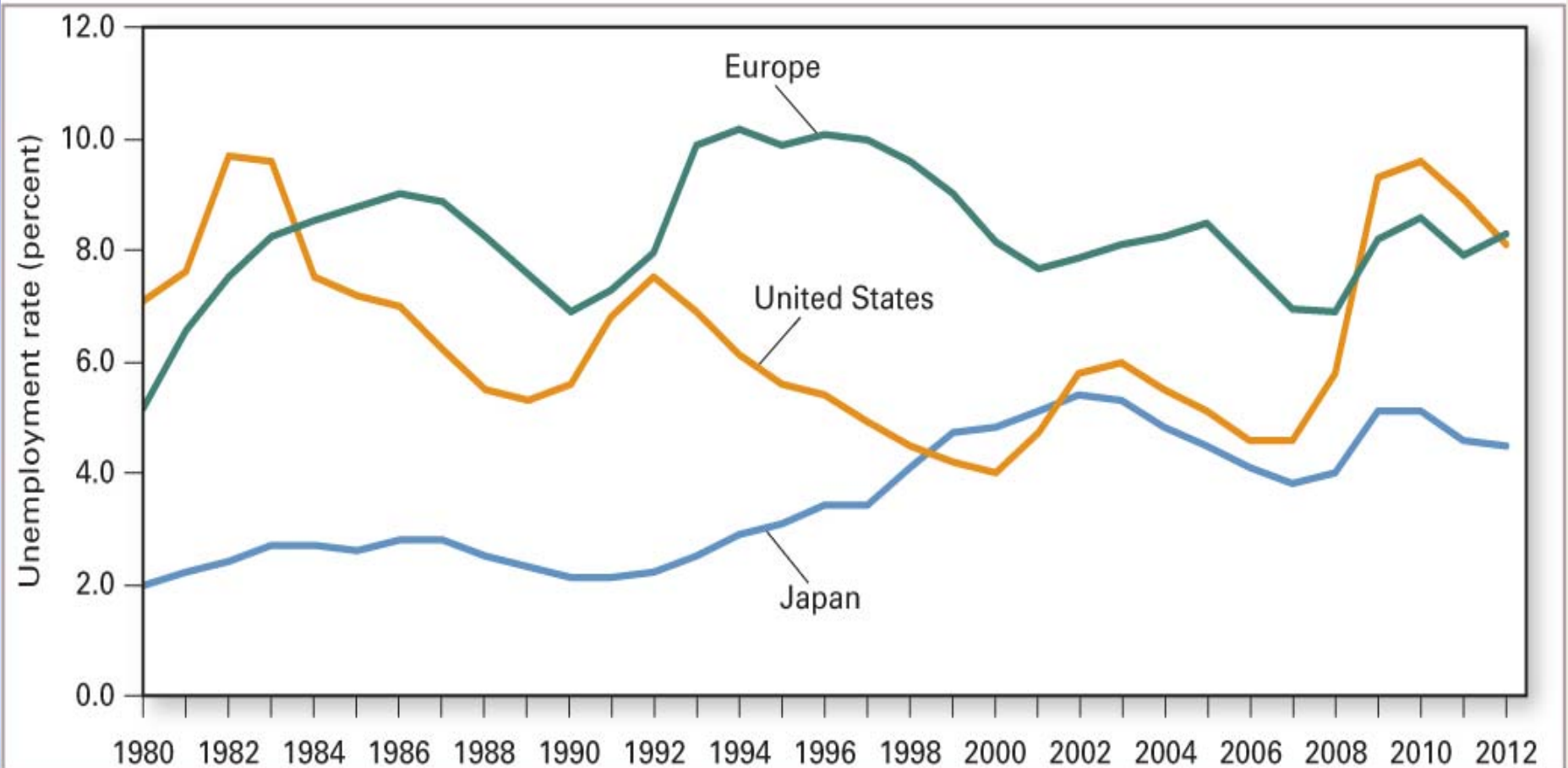
- Unemployment trends
 - US: down
 - Japan: up
 - Low unemployment : Job security
 - Bankruptcy
 - Western Europe: remained high
 - Higher unemployment benefits
 - Last longer
 - Government regulations



Exhibit 5 In the Last Quarter Century, U.S. Unemployment Rate Fell, Europe's Stayed High, Japan's Rose

Exhibit 5

Unemployment Rates Increased With the Global Financial Crisis of 2008



SOURCE: Based on standardized rates in *OECD Economic Outlook*, 93 (June 2013); and *Economic Report of the President*, February 2013. Figures for Europe are the averages for France, Germany, Italy, and the United Kingdom. For the latest international data, go to <http://www.bls.gov/fls/home.htm>.



Problems

- Official unemployment figures
 - Understate unemployment
 - Discouraged workers
 - Marginally attached to the labor force
 - Underemployed
 - Only part-time (want full-time)
 - Overqualified





Problems

- Official unemployment figures
 - Overstate unemployment
 - Looking for work
 - Only to qualify for unemployment benefits
 - Only full-time (want part-time)
 - Underground economy
- Official U.S. unemployment figures
 - Tend to underestimate unemployment



Inflation

- Inflation
 - Sustained increase in economy's average price level
- Annual inflation rate
 - Percentage increase in the average price level from one year to the next



Inflation

- Hyperinflation
 - Extremely high inflation
- Deflation
 - Sustained decrease in price level
- Disinflation
 - Reduction in the rate of inflation

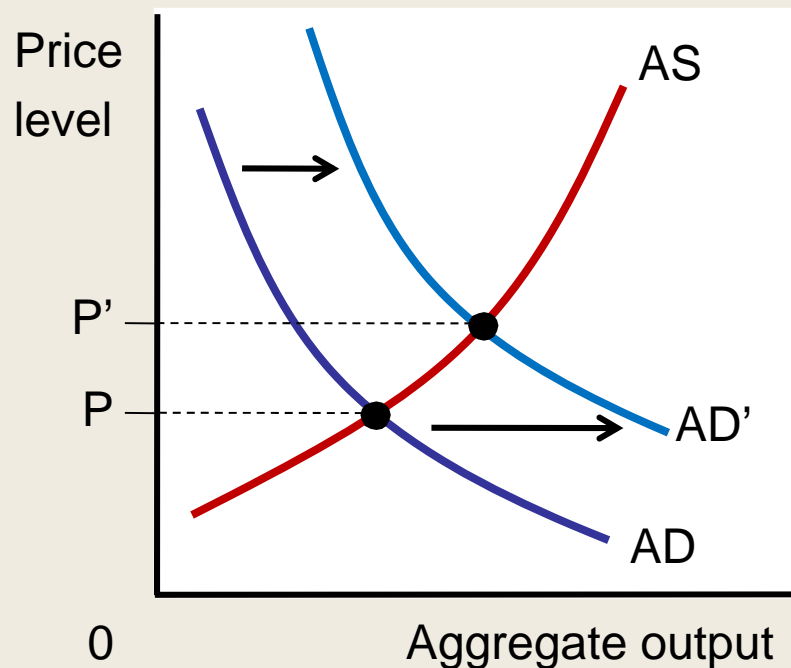


Two Sources of Inflation

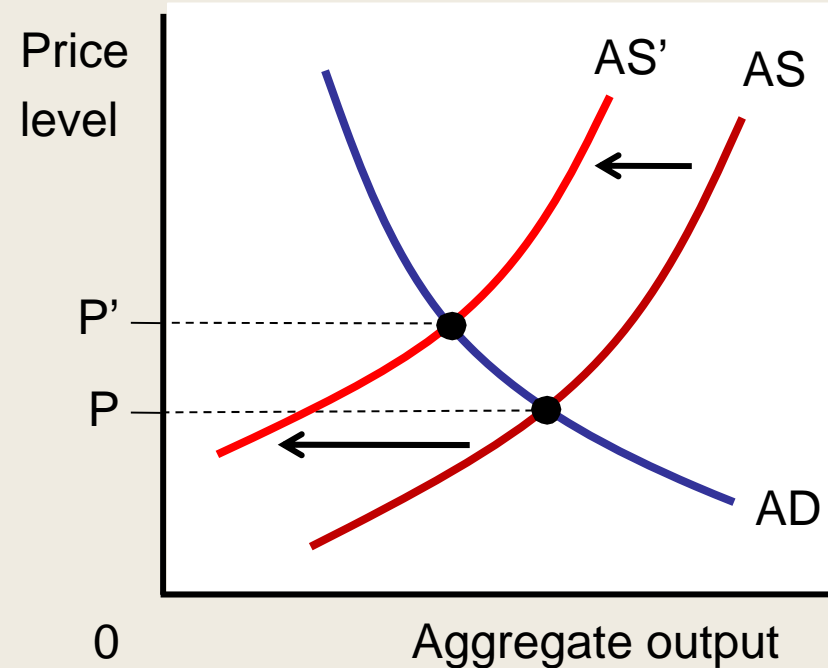
- Increase in AD
 - Demand-pull inflation
 - Increased government spending
 - Social programs
- Decrease in AS
 - Cost-push inflation
 - Increase cost of production
 - Push up the price level
 - Stagflation

Exhibit 6 Inflation Caused by Shifts of Aggregate Demand and Aggregate Supply Curves

(a) Demand-pull inflation: inflation caused by an increase of aggregate demand



(b) Cost-push inflation: inflation caused by a decrease of aggregate supply



Panel (a) illustrates demand-pull inflation. An outward shift of the aggregate demand to AD' "pulls" the price level up from P to P' . Panel (b) shows cost-push inflation. A decrease of aggregate supply to AS' "pushes" the price level up from P to P' .



A Historical Look

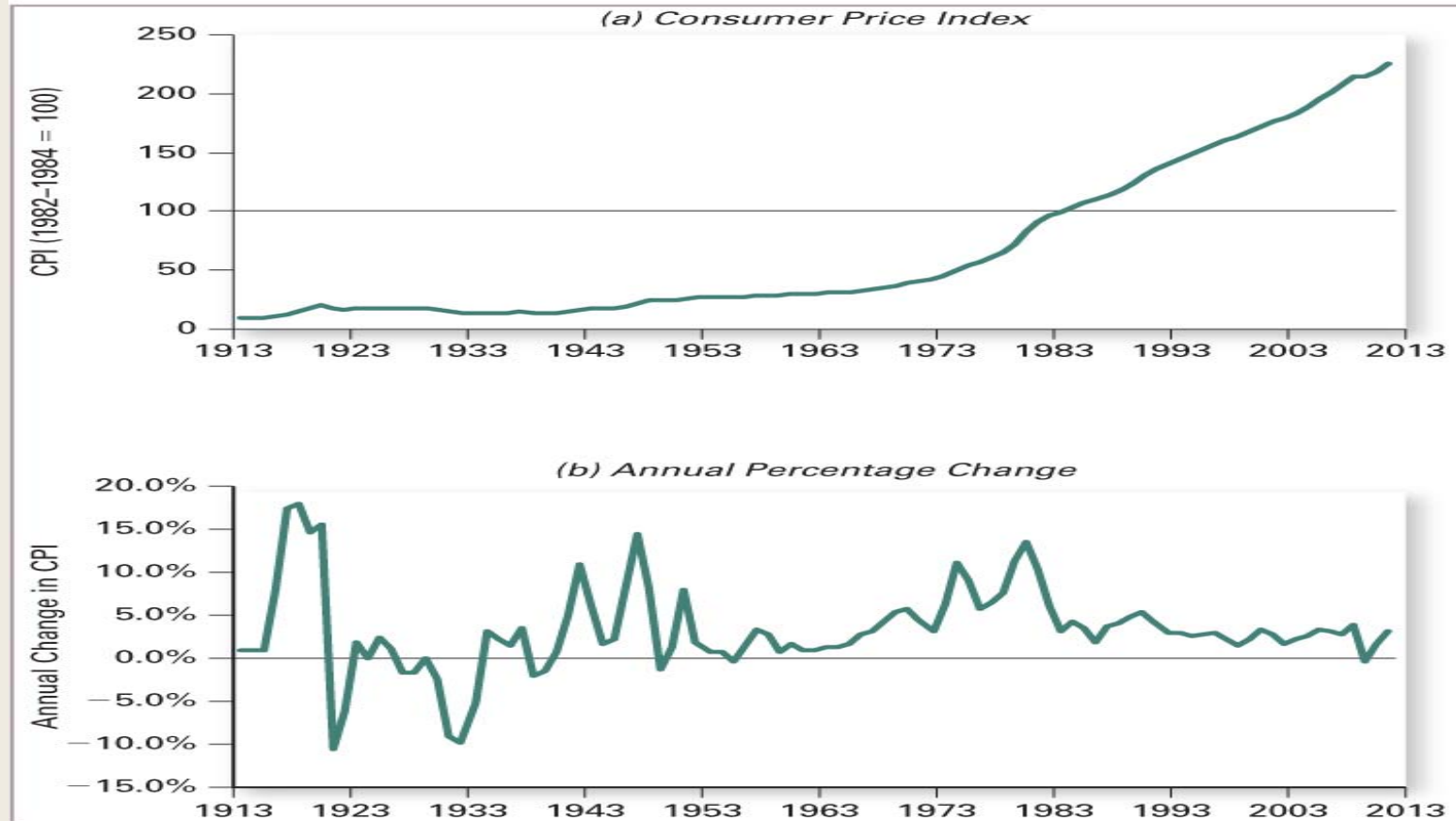
- Price level, US, since 1913
 - Steady increase
- Inflation or deflation, US, since 1913
 - Before 1950s
 - High inflation – war related
 - Followed by deflation
 - Since 1950s
 - Inflation: 3.7% per year

Exhibit 7

Consumer Price Index Since 1913 (a)

Exhibit 7

Consumer Price Index Since 1913



SOURCE: The CPI home page of the U.S. Bureau of Labor Statistics is at <http://www.bls.gov/cpi/home.htm>. Go there for the latest figures.

Panel (a) shows that, despite fluctuations, the price level, as measured by the consumer price index, was lower in 1940 than in 1920. The price level began rising in the 1940s.



Anticipated vs. Unanticipated

- Anticipated inflation
 - Expected inflation
- If inflation $>$ expected
 - Sellers lose
 - Buyers gain
- If inflation $<$ expected
 - Sellers gain
 - Buyers lose





Inflation

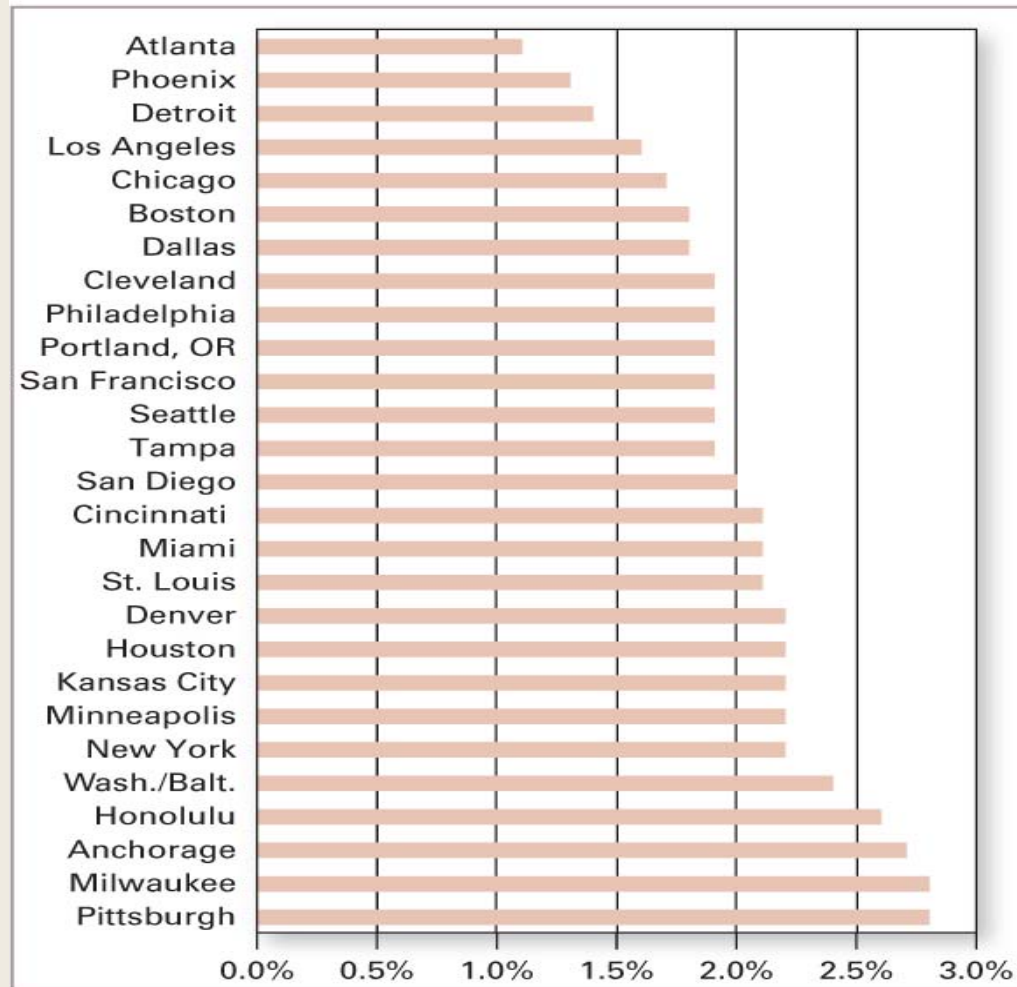
- Unpopular
- Imposes transaction costs
- Obscures relative price changes
- Differ across metropolitan areas
 - Housing prices

Exhibit 8

Average Annual Inflation from 2007 to 2011 Differed Across U.S. Metropolitan Areas

Exhibit 8

Average Annual Inflation from 2007 to 2011 Differed Across U.S. Metropolitan Areas



SOURCE: Annual averages for 2007 to 2011 based on CPI estimates from the U.S. Bureau of Labor Statistics. For the latest figures go to <http://www.bls.gov/cpi/home.htm> and find "Regional Resources."



International Comparisons

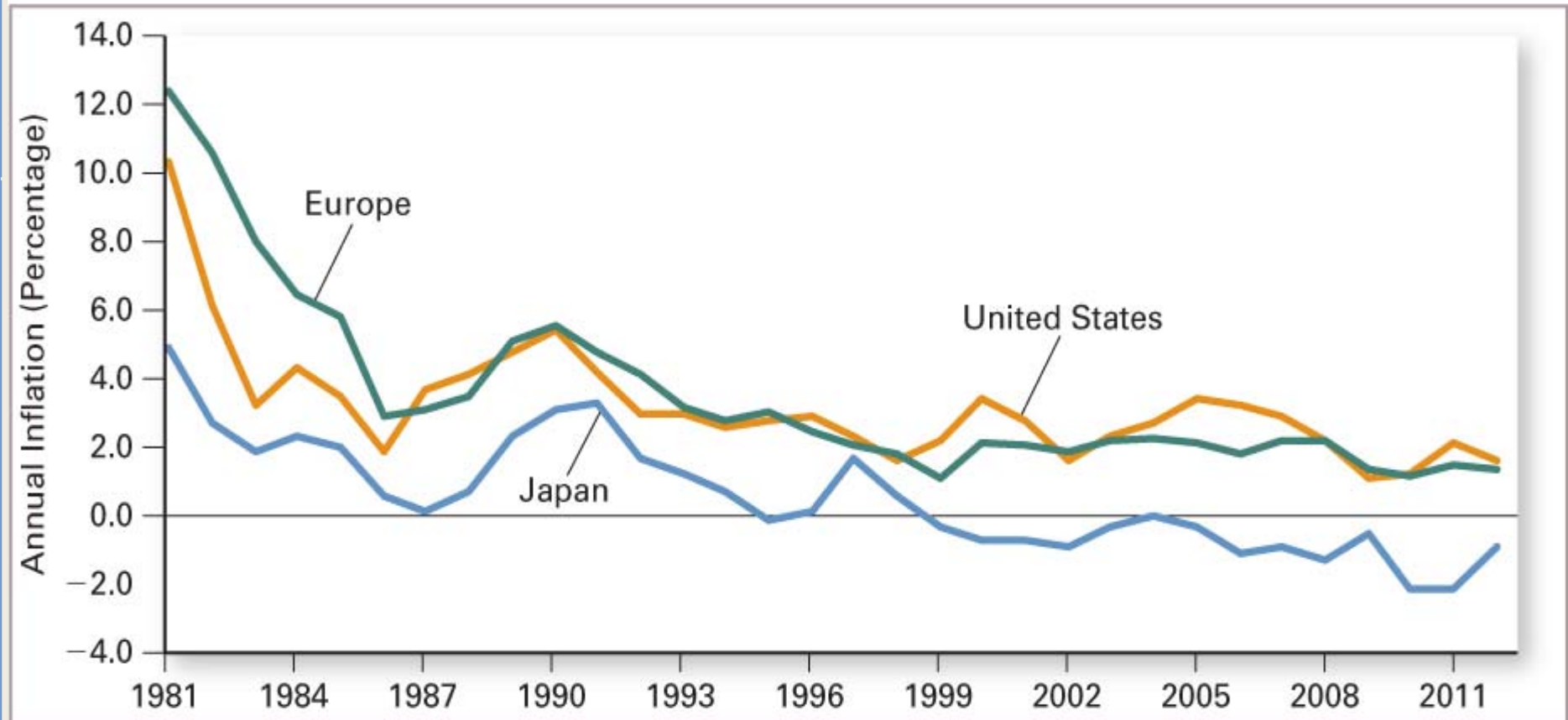
- First half of 1980s
 - Declining inflation
- Mid-1980s to early 1990s
 - Rising inflation
- Overall trend since 1980s
 - Lower inflation
- 2009
 - Price level declined in U.S. and Japan



Exhibit 9 Inflation Rates in Major Economies Have Trended Lower Over the Past Three Decades

Exhibit 9

Inflation Rates in Major Economies Have Trended Lower Over the Past Three Decades



SOURCE: Developed from CPI inflation reported in *OECD Economic Outlook*, 93 (June 2013). Figures for Europe are the averages for France, Germany, Italy, and the United Kingdom. For the latest data, go to <http://www.bls.gov/fls/home.htm>.



Inflation and Interest Rates

- Interest
 - Dollar amount paid by borrowers to lenders
- Interest rate
 - Interest per year
 - As a percentage of the amount loaned





Inflation and Interest Rates

- Supply of loanable funds
 - Amount of money people are willing to lend
 - Upward sloping
- Demand of loanable funds
 - Amount of funds demanded by households, firms, and governments
 - Downward sloping



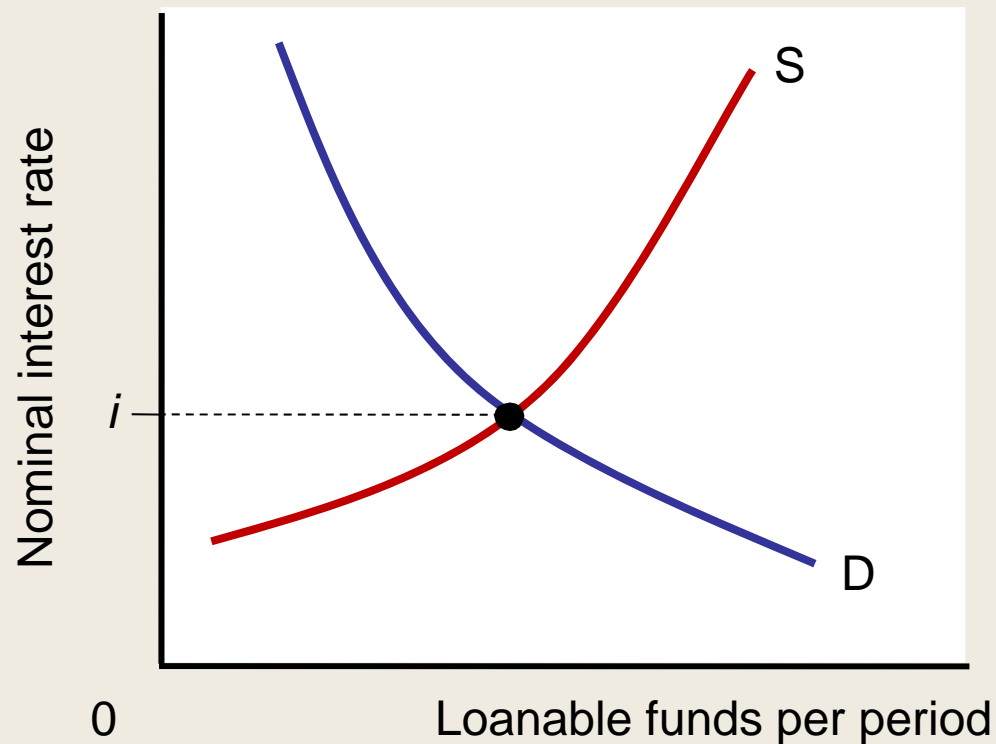
Inflation and Interest Rates

- Interest rate
 - Inversely related with the quantity of loanable funds demanded
 - Downward-sloping demand curve
 - Directly related with the quantity of loanable funds supplied
 - Upward-sloping supply curve



Exhibit 10

The Market for Loanable Funds



The upward-sloping supply curve, S , shows that more loanable funds are supplied at higher interest rates. The downward-sloping demand curve, D , shows that the quantity of loanable funds demanded is greater at lower interest rates. The two curves intersect to determine the market interest rate, i .



Inflation and Interest Rates

- Nominal interest rate
 - Interest rate expressed in dollars of current value
 - Not adjusted for inflation
 - Specified on the loan agreement
- Real interest rate
 - Interest rate expressed in dollars of constant purchasing power
 - = Nominal interest rate – Inflation rate





Why is Inflation Unpopular?

- Pay higher prices
 - Inflation = Penalty
- Receive higher receipts
 - Higher income
 - ‘well-deserved’ reward
- Fixed nominal income
 - Unadjusted for inflation
- Social Security
 - Adjusted for inflation (COLA)

