

Part B: Calculating and Understanding Real GDP

In the 2011 recession, GDP rose by \$190 billion. How can this be? Shouldn't GDP fall in a recession?

Real GDP

Say just 2 things are produced: doctor visits and cars

2013: 100M visits @ \$50 each

10M cars @ \$20,000 each

2014: 103M visits @ \$53 each

11M cars and \$20,500 each

Base year: 2013

Q: Real GDP in 2014 would be:

- A. $100M \times \$50 + 10M \times \$20,000$
 - B. $100M \times \$53 + 10M \times \$20,500$
 - C. $103M \times \$50 + 11M \times \$20,000$
 - D. $103M \times \$53 + 11M \times \$20,500$ *nominal GDP*
- i.e. $P \times Q$ for every good in GDP and sum all

Real vs. Nominal GDP

Both use same Q (amounts produced)

Prices (P) different-how value prod.?

Year	Prices of nominal GDP	Prices for real GDP
2014	2014	2009
2007	2007	2009

-Base year for real GDP (now 2009) updated every decade or so

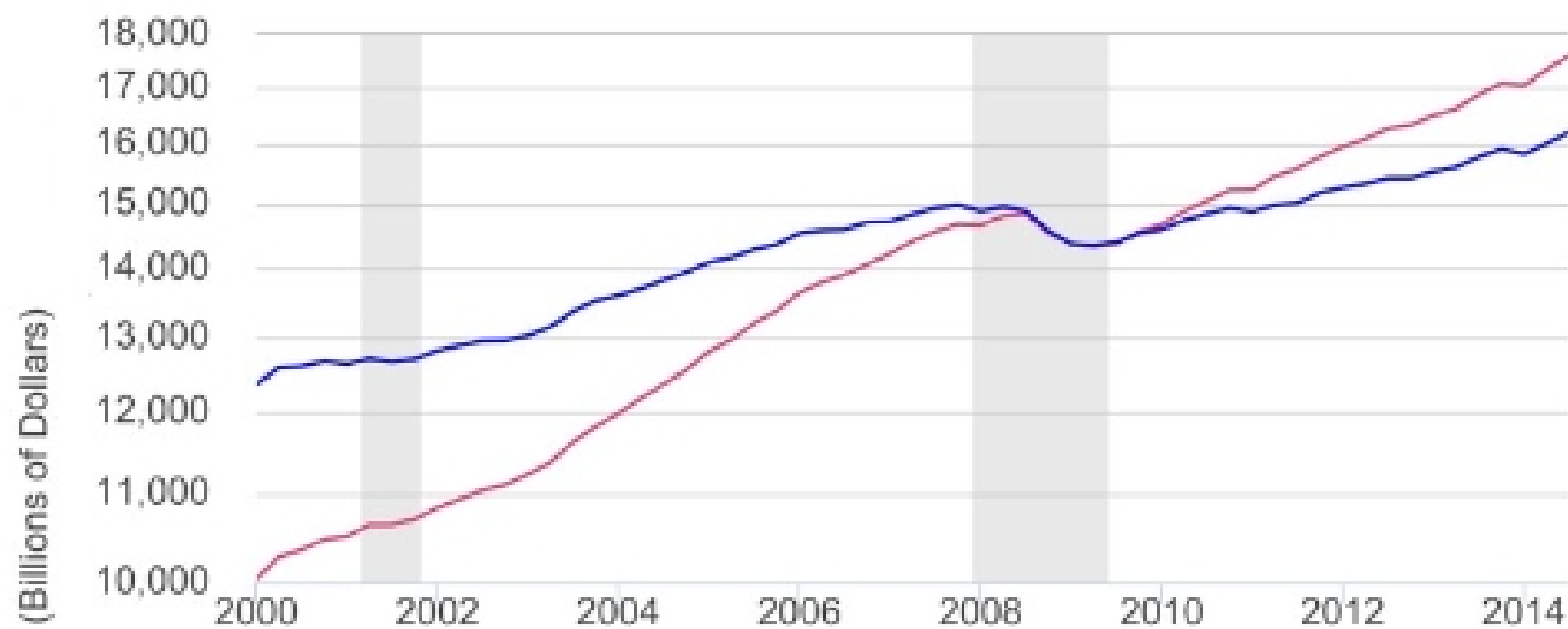
-Other names: nominal GDP=current dollar GDP

real GDP=constant dollar GDP=chained GDP

Q: Which of the following would be considered money in the U.S.? Keep in mind that currency is the same as cash.

- A. cash
- B. cash+funds in checking accounts
- C. cash+funds in checking accounts+savings bonds
- D. cash+funds in checking accounts+savings bonds+corporate stock
- E. cash+funds in checking accounts+savings bonds+corporate stock+capital

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Shaded areas indicate US recessions - 2015 research.stlouisfed.org

Q: There was inflation over this period (that is, the prices of all goods rose). Which is real GDP?

- A. red line
- B. blue line

*Real GDP, use base year, 2009 (P*Q)

*Real GDP > Nominal GDP is year 2009, why?

-compared 2009 prices, it inflated in 2009

*Real GDP = Nominal GDP in year 2009

-base year

Q: In a recession, production declines. Also, the U.S. almost always has inflation. With these in mind, which is most likely to fall in a recession.

- A. real GDP
- B. Nominal GDP

Real GDP is most often used to track the economy. It was \$16.2 trillion in 2014 III (nominal GDP was \$17.6 trillion)

Real GDP

Q: In 2014 III real GDP was \$16.2 trillion and in 2013 III it was \$15.8 trillion. What was the annual economic growth rate (the percentage change in real GDP)?

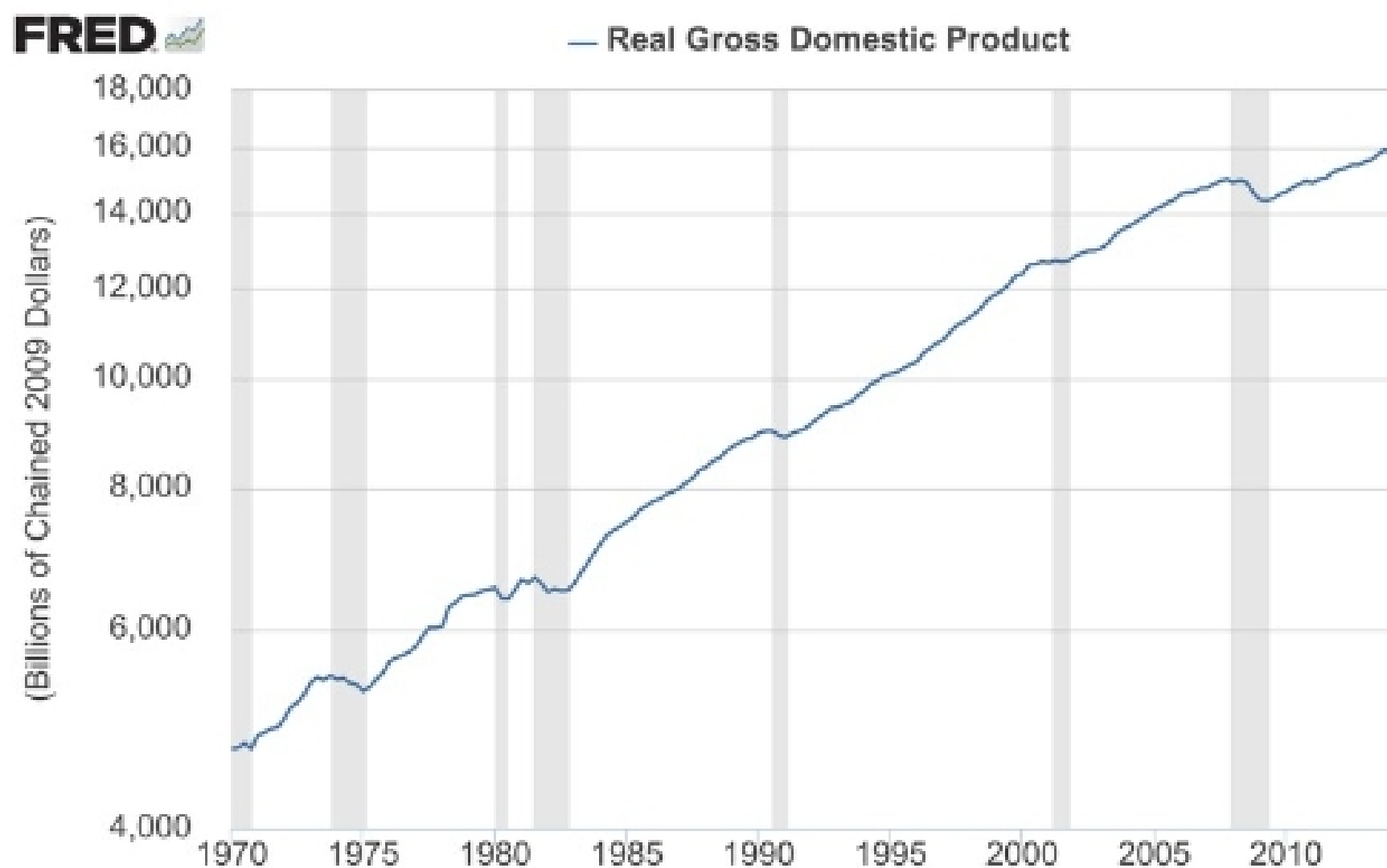
- A. $(\$15.8 - \$16.2) / \$16.2$
- B. $(\$16.2 - \$15.8) / \$15.8$
- C. $(\$15.8 - \$16.2) / \$15.8$
- D. $(\$16.2 - \$15.8) / \$16.2$

2013 III to 2014 III: 2.5%

But, from 2014 II to 2014 III it was 5.0% (fastest since the Great Recession of 2007-2009)

"economic growth" accelerated → more hiring

$$\text{Annual Economic Growth Rate} = \frac{\text{most recent value} - \text{initial}}{\text{initial}}$$



- I. Don't understand: why GDP is so much higher now than it was
 - II. Surprising: Income grew (to ↑ GDP); economy grew a lot
- GDP goes down during recessions
 - Expansions are the periods in between
 - In the earlier period 4 recessions because of the things causing them
 - Later times there were less recession to less causes

Real GDP and the Great Recession (2007-2009)

- Real GDP fell about \$0.6 trillion (4.2%↓)
- Most severe downturn since the Great Depression of the 1930s (33%↓)
- Lead to a rise in the unemployment rate from 4.5% to 10% (now 5.6%)
- To deal with it, the federal government:
 1. Increased expenditures (so G and trans. ↑)
 2. Cut taxes (to cushion falls in C and I)
 3. There are "fiscal policy"-changes in the federal budget
- The Federal Reserve (i.e. the "Fed")
 1. cut interest rate to stimulate C and I-"monetary policy"
 2. aided the financial system
- together, generally thought to have kept us from something much worse

End of Part B: Calculating and Understanding Real GDP