

Public Affairs 854  
**Macroeconomic Policy and  
International Financial Regulation**

Lecture 2  
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# Concepts/Definitions

- GDP
- Real versus nominal
- Price level, inflation
- Money
- Interest rates

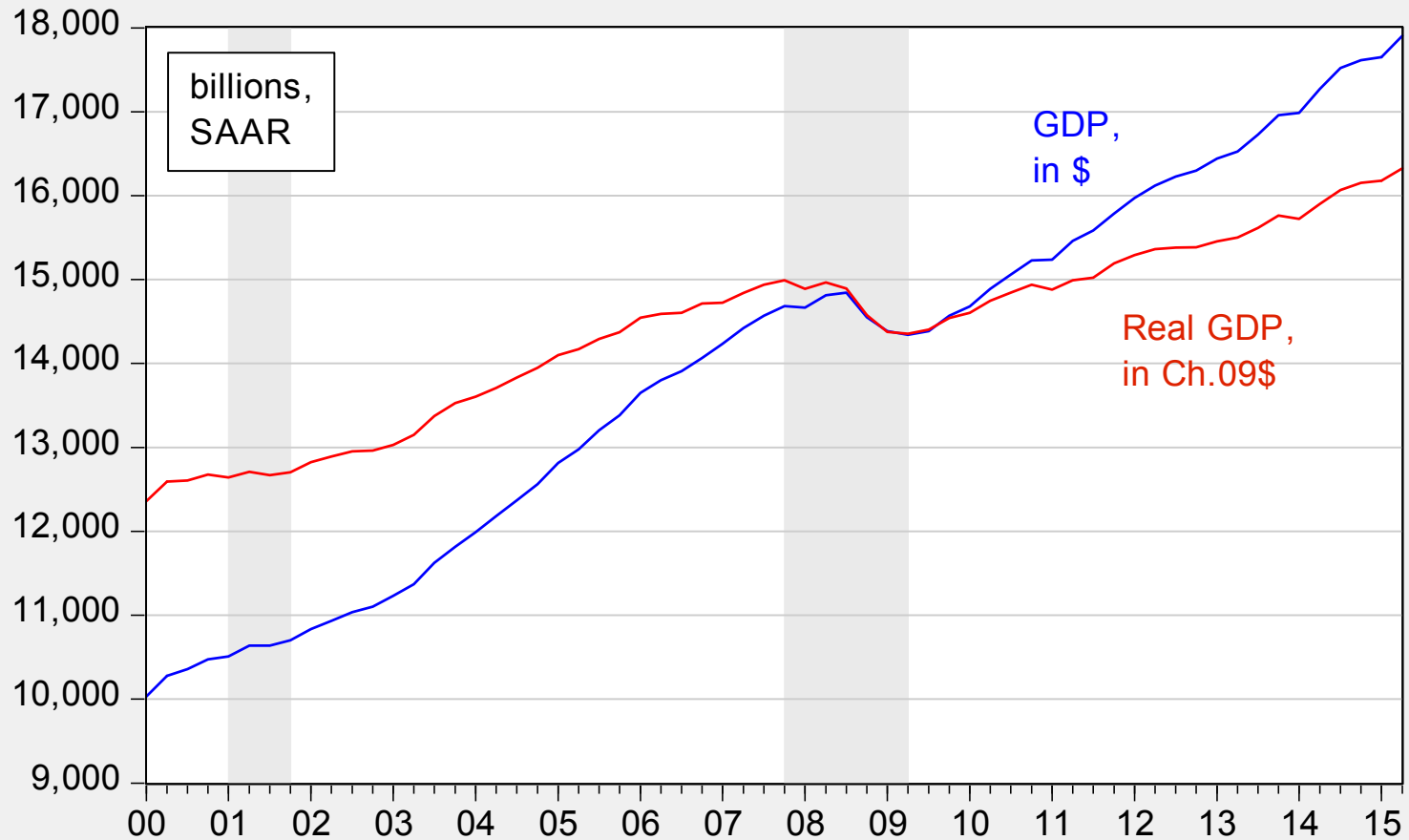
# GDP

- Sum of value of all goods and services produced within a given time period (usually a year or a quarter)
- If quarterly, usually adjusted up to yearly rates
- $GDP = C + I + G + (Ex - Im)$
- All these are “final” goods and services

# Real vs. Nominal

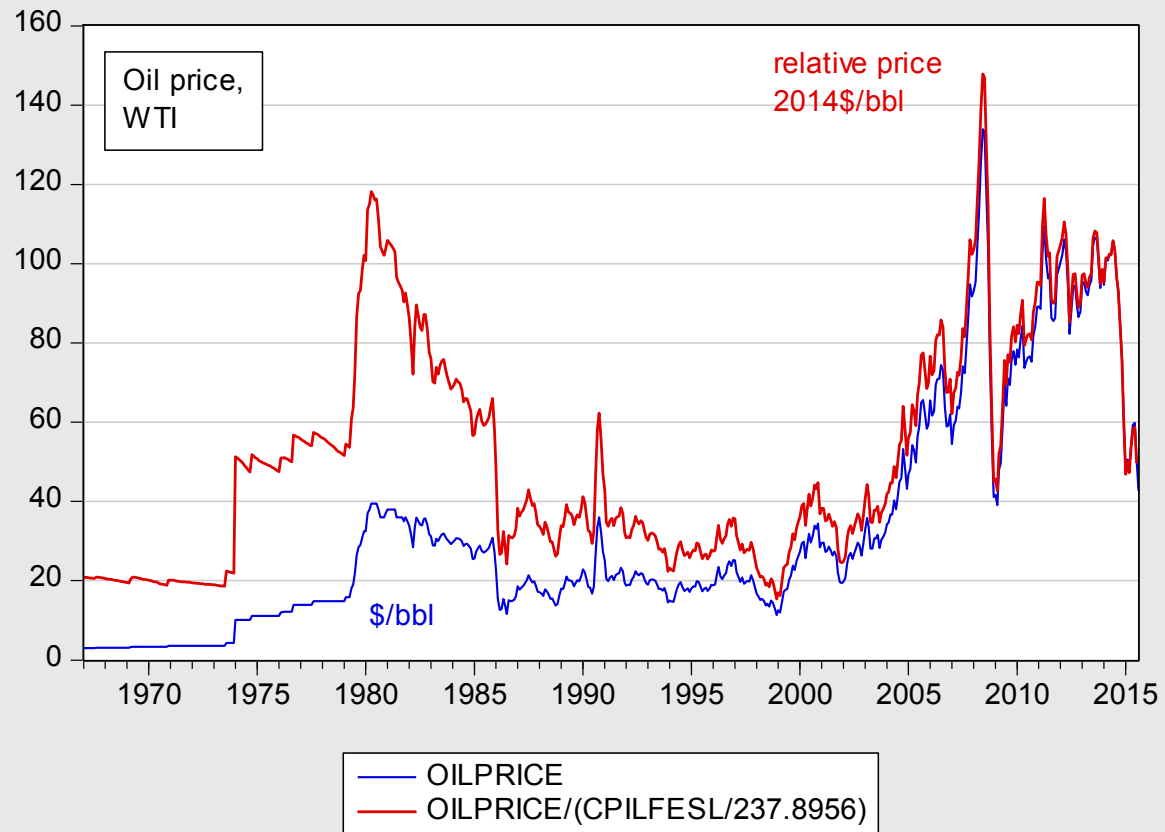
- Nominal values are expressed at values recorded. GDP is just all the values of items spent on, added up.
- Real values control for the general price level, to get in principle “quantities”.
- $\text{Nominal Value/Price index} = \text{Real Quantity}$
- $\text{Nominal Price/Price index} = \text{Relative Price}$

# Nominal vs. Real



Source: BEA, 2015Q2 2<sup>nd</sup> release

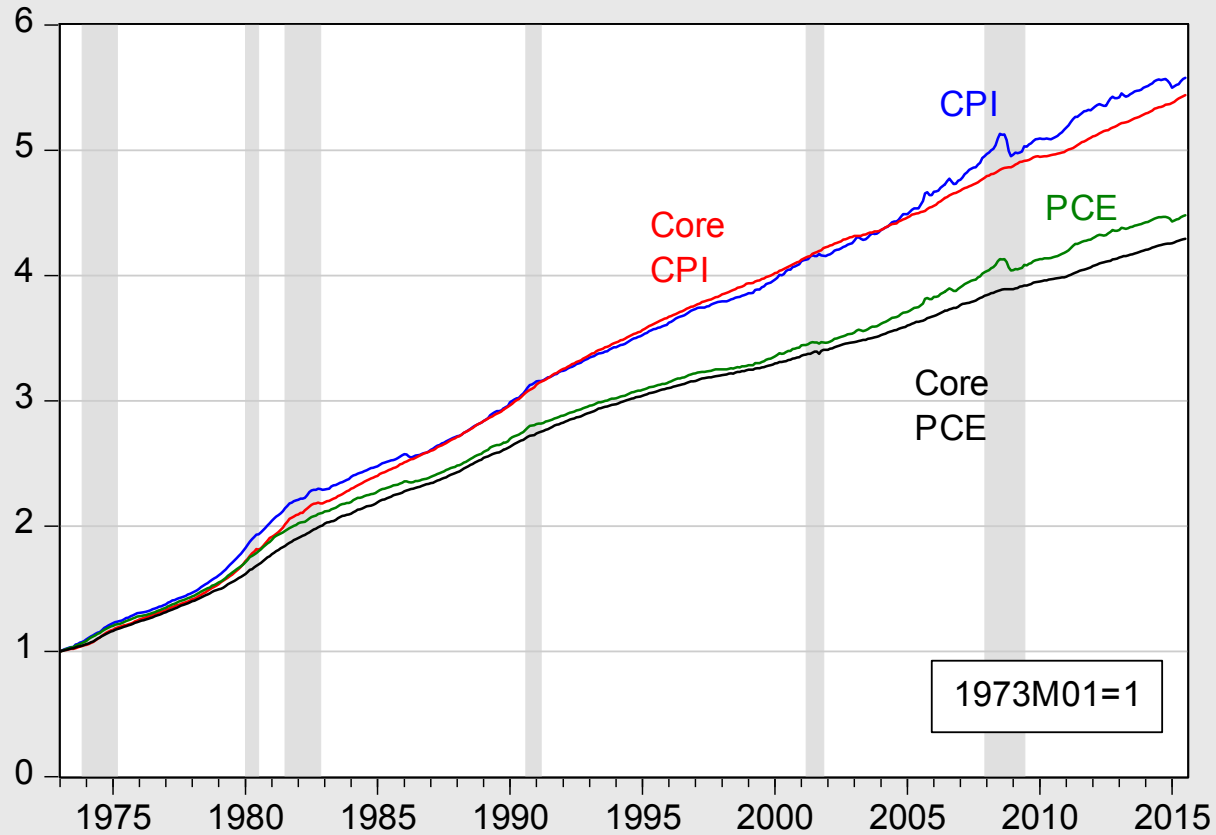
# Relative Price (of Oil)



# Price Level vs. Inflation

- Let  $P$  = price level
- Inflation = *percent* rate of change of price level
- Standard definition:  $\pi_t = (P_t - P_{t-1})/P_{t-1}$  (on annual basis)
- Sometimes, a continuously compounded definition is used:
- $\pi_t = \ln(P_t) - \ln(P_{t-1})$
- Standard variables: CPI, core CPI, PCE

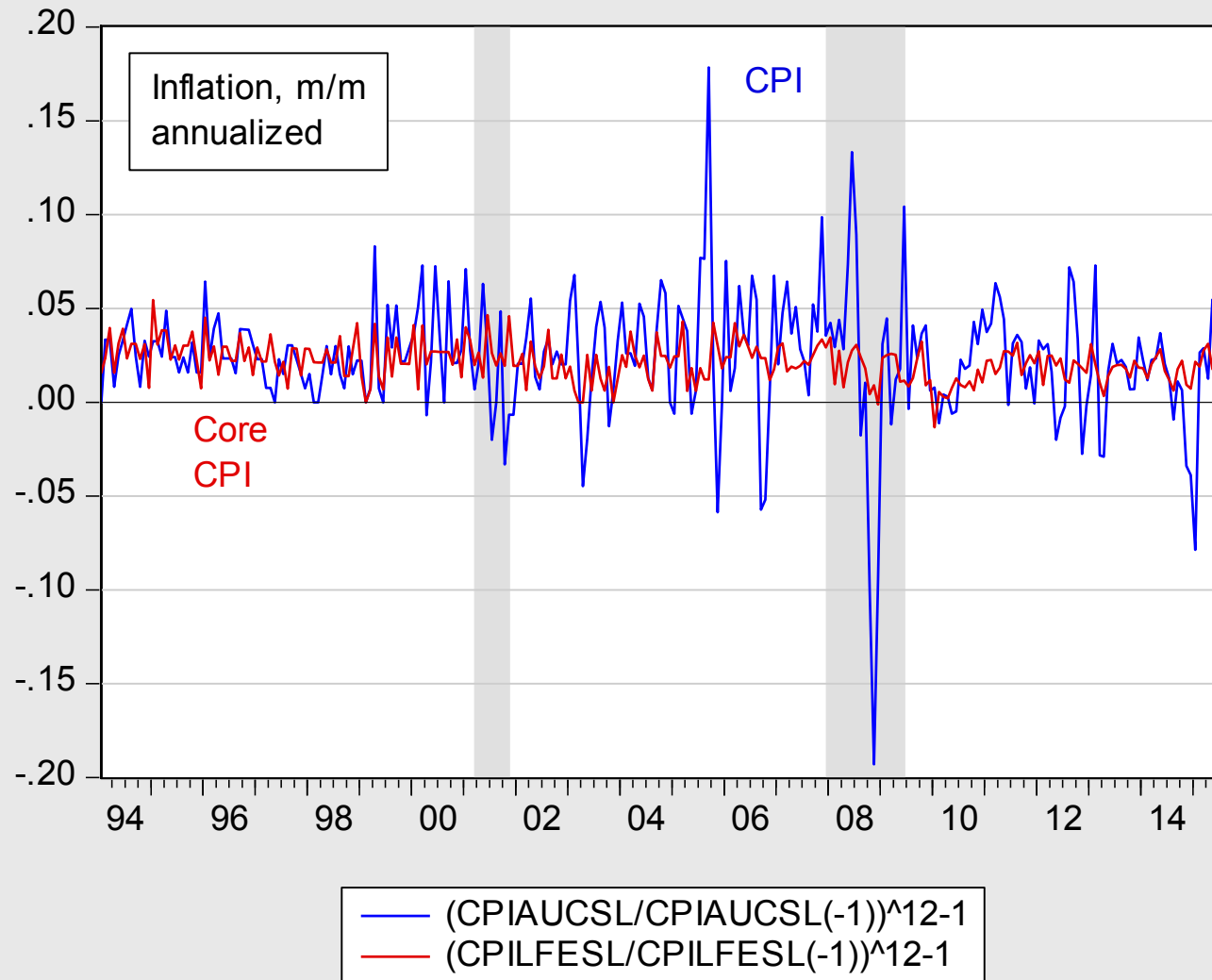
# Price Levels



- CPIAUCSL/@ELEM(CPIAUCSL,73.01)
- CPILFESL/@ELEM(CPILFESL,73.01)
- PCEPI/@ELEM(PCEPI,73.01)
- PCEPILFE/@ELEM(PCEPILFE,73.01)



# Inflation: Total vs. Core



# Inflation: M/M vs. Y/Y

