Intro to Money and Inflation

Intro to Money and Inflation—Economics of Global Business, Revised: April 17, 2018

A Laugh...



A Laugh...



http://www.theonion.com/articles/us-economy-grinds-to-halt-as-nation-realizes-money,2912/[4/14/2010 4:30:19 PM]

What is Money?

- ▶ Medium of exchange.
 - we use it to buy stuff
- ► Store of value.
 - transfers purchasing power from the present to the future
- ▶ Unit of account
 - the common unit by which everyone measures prices and values

Types of Money

- ► Commodity Money
 - Has intrinsic value
 - Examples: Gold, cigarettes in P.O.W. camps
- ► Fiat money
 - Has no intrinsic value
 - Examples: paper currency, bit-coin

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Monetary Policy Terminology

- ▶ The money supply is the quantity of money in the economy.
 - Various definitions of money supply (example M1 is currency + demand deposits).
 - \bullet Monetary base is an important measure, it is currency + banking reserves.
- ▶ Monetary policy is the control over the money supply.
 - Monetary policy is conducted by a country's central bank.
 - The U.S. central bank is called the Federal Reserve ("the Fed").
 - To control the money supply, the Fed uses open market operations, the purchase and sale of government bonds.
 - "Tight" monetary policy is to facilitate a slow down in the economy. "Loose" monetary policy is to facilitate a speed up.

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Inflation in the US



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Velocity

- ▶ Basic concept: the rate at which money circulates
- ► Definition: the number of times the average dollar bill changes hands in a given time period
- ► Example:
 - In 2012, \$500 billion in transactions
 - money supply = \$100 billion
 - The average dollar is used in five transactions in 2012
 - ullet So, velocity =5

Velocity

- ▶ Use nominal GDP as a proxy for total transactions.
- ► Then

$$V = \frac{P \times Y}{M} \tag{1}$$

- P = Price of output (GDP Deflator)
- Y = Quantity of output (Real GDP)
- $P \times Y = \text{value of output (nominal GDP)}$

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Quantity Theory

▶ One equation

$$M \times V = P \times Y$$

- ▶ Several ways to look at this...
 - An identity, that is hold by definition (specifically V).
 - A theory of the demand for money (later in course).

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Quantity Theory

▶ In growth rates

$$\gamma_{m} + \gamma_{v} = \pi + \gamma_{v}$$

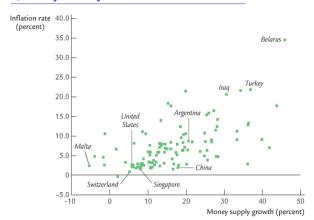
- $\gamma_{\it m}=$ growth of money supply
- $\gamma_{\rm v}=$ growth of velocity
- $\pi = \text{growth of price level (inflation)}$
- $\gamma_v = \text{growth of real GDP}$

Classical Dichotomy

- ► Two assumptions
 - V is constant
 - ullet Y not affected by changes in M (Chapter 3 of Mankiw)
 - This is the classical dichotomy, money has no affect on real variables.
 - ▶ We will loosen this idea later in course for the short run.
- ► One conclusion:
 - money growth causes inflation

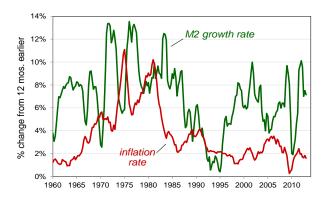
$$\pi = \gamma_m - \gamma_y$$

Quantity Theory, Across Countries



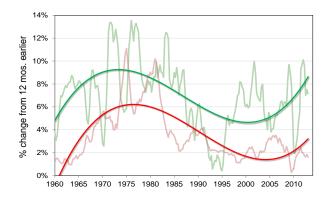
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Quantity Theory, US Short-Run



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Quantity Theory, US Long-Run



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Zimbabwe

- ▶ Dec 06: inflation over 1000 percent
- ► Feb 07: inflation ruled "illegal"
- ▶ Oct 08: inflation over 200 million percent (!)
- ▶ Jan 09: transactions allowed in foreign currencies
 - Soldiers and teachers to be paid in USD
- ▶ Feb 09: 12 zeros knocked off currency

Buying Lunch in Zimbabwe



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