

Exercise session #4 - Money and inflation

Problem 1 - Functions of money, D-F 408/1(9 edition)

Evaluate the effects of the following changes on the demand for M1 and M2. Which of the functions of money do they relate to?

- "Instant-cash" machines that allow 24-hour withdrawals from savings accounts at banks.
- The employment of more tellers at your bank.
- An increase in inflationary expectations.
- Widespread acceptance of credit cards.
- Fear of imminent collapse of the government.
- A rise in the interest rate on time deposits.
- The rise of the e-commerce.

Problem 2 - Money supply; Holman 113/2 Currency is 100 mil, deposits are 400 mil and reserve-deposit ratio is $1/8$.

1. How big is money supply?
2. How big are reserves?
3. When central bank buys government bonds for 20 mil, what will be the increase in the money supply?

Problem 3 - Application of Baumol-Tobin model; H 113/3

You get a monthly wage of 20,000CZK and pay 5,000 in taxes. You hold money both in cash and on a bank account with 6% interest rate. Expected inflation rate is 2%. Each withdrawal of money at bank takes 30 minutes of your time, which you subjectively value at 20CZK. The transaction fee of bank is 5 CZK per withdrawal. What will be the optimal level of real money balances (cash) holding?

Problem 4 - Velocity of money; D-F 408/2

Is velocity high or low relative to trend during recession? Why? How can central bank influence velocity of money?

Questions for review:

Lecture 4: Money and inflation:

- **Money:** Define money. What are the three main functions of money? Explain them. What are the two basic types of money with regards to their intrinsic value? Give examples
- **Money supply - role of central bank:** Who regulates the money supply in the Czech republic? Define monetary aggregates M1, M2 and M3. What functions of money do they perform? What are the reserves? What is their role in the regulation of money supply in the economy? State three basic instruments of monetary policy + how do they affect money supply.
- **Money supply - role of banks:** How can banks create money? Based on the simple model presented at lecture, what are the main determinants of money supply in the economy (+ who are the agents)?
- **Quantity theory of money:** Write down quantity equation and explain what it represents. What does the assumption of constant income velocity of money imply?
- **Money demand - role of interest rates:** Write down the Fisher equation. What is Fisher effect? How did the expectations about inflation translate into demand for real money holdings?
- **Money demand - micro theories:** Explain transaction and portfolio theory of money demand. What functions of money do they emphasize? Explain the main idea behind Baumol-Tobin model (use pictures).
- **Causes of inflation:** Explain the difference between demand-pull and cost-push inflation.
- **Costs of inflation** Categorize the costs of inflation on micro level. List all the costs of expected inflation and rank them according to their severity (in your opinion). List all the costs of unexpected inflation and rank them according to their severity (in your opinion). Can you think of any benefits of inflation?
- **Hyperinflation:** How do we define hyperinflation? Explain the role of monetary and fiscal policy in causing and ending hyperinflation. Explain the role of households in steering the inflation. What is seignorage?
- **Classical dichotomy:** Define real variables and nominal variables, give example. Explain the concept of neutrality of money.