Review Notes – Money, Inflation, and Unemployment

• Money
  ▪ What is money/what does money do?
    • Store of value
    • Medium of exchange
    • Measure of value
    • Standard of deferred payment
  ▪ What characteristics are required for good money?
    • Durability
    • Divisibility
    • Homogeneity
    • Portability
    • Stability of supply
    • Relative scarcity
  ▪ Commodity money
    • Definition = money which has some intrinsic value (i.e., value in use)
    • Advantages and disadvantages
  ▪ Fiat money
    • Definition = money which has no intrinsic value (i.e., no value in use)
    • Advantages and disadvantages
  ▪ The supply of money
    • What is currency?
    • Measures of the supply of money
      o $M_1 = \text{currency} + \text{Demand Deposits} \text{(what are those?)}
      o $M_2 = M_1 + \text{small time deposits} \text{(what are those?)}
      o $M_3 = M_2 + \text{large time deposits} + \text{institutional money market funds}
      o $L = M_3 + \text{other liquid assets}
      o What is the difference between these different measures?
  ▪ The Creation of money
    • The reserve ratio (rr) = the percent of deposits which are not loaned out.
    • Use the following assumptions to see how money is created
      o All banks have the same reserve ratio (rr)
      o No banks hold excess reserves (reserves in excess of that implied by rr)
      o There are no cash drains from the system
    • What happens when $1,000 in extra money is deposited into a demand deposit account?
      o What is a t-account?
      o Assuming the rr=20 percent, the bank will
        ▪ Keep $200 on hand to meet cash requirements
- Loan out $800 to another customer
- What does that customer do with the $800? Deposit it in a bank => demand deposits increase by a further $800
  - Hence, the bank will loan out a further $640, which will be deposited in a bank
  - Hence, the bank will loan out a further $512, which will be deposited in a bank
  - Hence, the bank will loan out a further $410, which will be deposited in a bank
  - Hence, the bank will loan out a further $328, which will be deposited in a bank
  - etc.
  - Every time demand deposits increase => the money supply increases
  - How much in total has the money supply increased?
    - $1,000 increase in the money supply from the initial $1,000 deposit
    - Plus $4,000 additional increase in the money supply through fractional reserve banking

- The potential money multiplier = \( m_p \) = for every dollar in additional deposits, how much could the money supply increase?
  - \( m_p = 1/rr \) (why? remember that \( rr = \text{reserve ratio} \))

- The actual money multiplier = \( m_a \) = for every dollar in additional deposits, how much does the money supply increase?

### Controlling the Supply of money

- What is monetary policy?
- Who controls monetary policy?
  - The Federal Reserve (what’s that?)
- How does the Fed control the money supply
  - Discount rate
  - Legal reserve ratio
  - Open market operations
  - Etc.

### Inflation

- Demand for money
  - Transactions demand for money
  - Quantity exchange equation – \( MV = PY \)
    - Define all terms and know what they mean
    - Real demand for money (\( M/P = kY \) – what’s \( k \)?)
    - Why does money supply determine nominal GDP (\( PY \))?
    - Why do increases in the money supply simply cause inflation?
• Interest rates
  • Real interest rates vs. Nominal interest rates
    o How are they related?
    o \( i = r + \pi \)
    o Which of the two is the cost of holding money?

• Costs of inflation
  • When inflation is expected
    o Shoe leather costs
    o Menu or re-pricing costs
    o Distortion costs
    o Cost of living costs
    o Inconvenience
  • When inflation is unexpected
    o Losers = creditors/those on fixed incomes
    o Winners = debtors

• Unemployment
  • Definitions
    • Natural rate of unemployment
    • Employed
    • Unemployed
    • Labor force
    • Labor force participation rates
    • Unemployment rate
    • Voluntary unemployment
    • Involuntary unemployment
  • Types of unemployment
    • Frictional unemployment
    • Structural unemployment
    • Seasonal unemployment
    • Cyclical unemployment
    • Induced unemployment