

Macroeconomics 201 Discussion Session Exercise #9 answers

1. What are the three ways the Fed can use to try to affect the money supply?
 - 1) set reserve requirement ratio (rrr) – proportion of reserves that banks must keep on hand and not lend. This determines the total lending capacity of the system through determining the proportion of reserves that banks may lend (excess reserves) and the money multiplier (simple money multiplier = $1/r$). To increase M_s , lower rrr; to decrease M_s , raise rrr. M_s is extremely sensitive to changes in rrr, because even a small % of a large number is a large number. Very hard to “fine-tune” M_s using the rrr, so almost never used for this purpose.
 - 2) Set discount rate (d.r.) – interest rate Fed charges private member banks to borrow reserves – higher d.r. means more expensive to borrow reserves, and banks pass on the higher cost to their customers (charge higher interest rates to borrowers). Lower d.r. means cheaper to borrow reserves from Fed, and banks pass on these lower costs to their customers in the form of lower interest rates on loans. To increase M_s , lower d.r.; to decrease M_s , raise d.r. Fed may use this between 2-5 times a year, depending on economic conditions.
 - 3) Open market operations – buying and selling bonds. Key is that money does not count in system when Fed is holding it. To increase M_s , buy bonds; to decrease M_s , sell bonds. Most often used by Fed (but defensively, to offset market fluctuations).
2. What are the three kinds of demand for money in Keynes and how are they determined? Draw the money demand function.

(Keynes asked: Why would anyone hold any of their wealth in the form of cash instead of higher interest-earning or profit-bearing assets?)

- 1) transactions demand – people hold some of their wealth in the form of cash to make regular daily, weekly, monthly transactions (determined by mpc, habit; stable)
- 2) precautionary demand – people keep some of their wealth in cash to respond to emergencies, like flat tire or broken arm (determined by tradition; stable)
- 3) speculative demand – people keep some wealth in cash to take advantage of unexpected financial opportunity (make a killing in the stock or bond market). Speculative demand determined by the relation of two rates of interest, the current, actual rate (i_c) and the expected future rate (i_f). To understand how speculative demand is determined by the relation between i_c and i_f , one must understand two things: 1) that investors want to “buy low and sell high”; and 2) inverse relation between bond prices and interest rates. (spec dem not stable; may be volatile)

If $i_c < i_f$, then you think interest rates are going to rise, so you think bond prices are going to fall, so sell bonds and hold cash. (speculative demand for cash is high)

If $i_c > i_f$, then you think interest rates are going to fall, so you think bond prices are going to rise, so buy bonds now and wait to sell them when the price has gone up. (speculative demand for cash is low)

3. Compare and contrast the exogenous and endogenous views of the money supply process. Integrate the endogenous view into the Keynesian analysis of the investment-saving relation.

Exogenous view: money supply determined outside the market by the central Bank (fed), through the three mechanisms it has at its disposal: reserve requirement ratio, discount rate, open market operations

Gives vertical money supply curve:

Endogenous M_s : M_s determined by market forces themselves, by demand for credit or demand for money. Gives horizontal M_s curve.

Demand for credit \rightarrow Fed and Private banks accommodate demand for credit \rightarrow credit is extended $\rightarrow I \uparrow \rightarrow Y \uparrow \rightarrow S \uparrow \rightarrow$ savings are deposited in banks, replenishing reserves initially depleted by the initial loans and even increasing reserves

4. What are the institutional mechanisms through which banks can extend their lending capacity beyond the limits imposed by reserve requirements?
 1. Fed funds – banks borrow from other banks
 2. Foreign banks lend dollars to U.S. banks (and aren't subject to Fed regulations)
 3. Cds – offer new attractive cds or convert present customers who have checking accounts into cds (cds have lower reserve requirement ratios)
 4. Repos – repurchasing agreements – an agreement between a buyer and a seller to reverse a transaction at a specified price at a specified future date (sell million bucks worth of bonds to another bank and agree to buy back for a million ten thousand)

tomorrow—you get to hold a million bucks overnight, increasing your average reserve holdings over that period)

5. Fed is lender of last resort – borrow reserves from fed (pay discount rate)
6. Open market operations – with or without repurchasing agreements attached

5. Outline Keynesian Expansionary Monetary Policy (KEMP) and Keynesian Anti-Inflationary Monetary Policy (KAIMP). What are the limitations of KEMP and KAIMP?

KEMP: $M_s \uparrow \rightarrow i \downarrow \rightarrow I \uparrow \rightarrow Y \uparrow$ (if $Y < Y_f$)

Limits of KEMP: 1. i may be insensitive to changes in M_s (liquidity trap)

2. I may be insensitive to changes in i (expectations of profitability are low, investor uncertainty)

3. Y may be insensitive to changes in I (if $Y = Y_f$; then $I \uparrow \rightarrow P \uparrow$ (inflation); but KEMP wouldn't—or shouldn't—be used if $Y = Y_f$)

KAIMP: $M_s \downarrow \rightarrow i \uparrow \rightarrow I \downarrow \rightarrow P \downarrow$ (if $Y = Y_f$)

Limits: 1. Only good for demand pull inflation, if inflation is due to cost-push or supply side factors, KAIMP is ineffective)

2. can overshoot the mark and cause $I \downarrow$ so much that there is a reduction in Y (recession)