FINAL EXAM REVIEW:

Recall the departmental part of the exam is comprehensive so be sure to study old reviews too. This review is on chapters 15 – 17 only!

I. Booms and Recessions

Boom: Real GDP > potential GDP
Recession: Real GDP < potential GDP

A. Consumption

Disposable Income (DI): Total income – net taxes

Consumption function: C = a + b DI
Where b = MPC (marginal propensity to consume) and a = autonomous consumption

B. Total Spending and Eqm GDP

→ if inventories increase, then real GDP > spending; firms will decrease output, decrease the number of workers which lowers real GDP
→ if inventories decrease, then real GDP < spending; firms will increase output, increase the number of workers which increases real GDP

C. Spending Shocks

$$\text{Change in real GDP} = \text{change in Investment} * \left(\frac{1}{1 - MPC}\right)$$

$$\text{Change in real GDP} = \text{change in Government purchases} * \left(\frac{1}{1 - MPC}\right)$$

$$\text{Change in real GDP} = \text{change in Net Exports} * \left(\frac{1}{1 - MPC}\right)$$

$$\text{Change in real GDP} = \text{change in Taxes} * \left(\frac{-MPC}{1 - MPC}\right)$$

D. Countercyclical Fiscal Policy

Any change in G or T to counteract spending shocks and keep economy close to potential output.

II. Monetary Policy

- Idea → Monetary Policy, changes the amount of "money" in the economy, can be used to affect aggregate demand by changing the short-term interest rates.

A. **Measuring amount of money in the U.S., M1 and M2:**

1) M1 = currency held by the public, traveler's checks, and checking deposits of individuals and businesses
2) M2 = M1 + money market accounts at banks + money market mutual funds accounts + savings deposits and small time deposits (CD's)

B. Tools of the Fed

1) ***Required Reserve Ratio (RRR)***
   Sets required reserve ration and holds the banks reserves
   Fed doesn't change this very often; frequent changes could cause unstable money supply

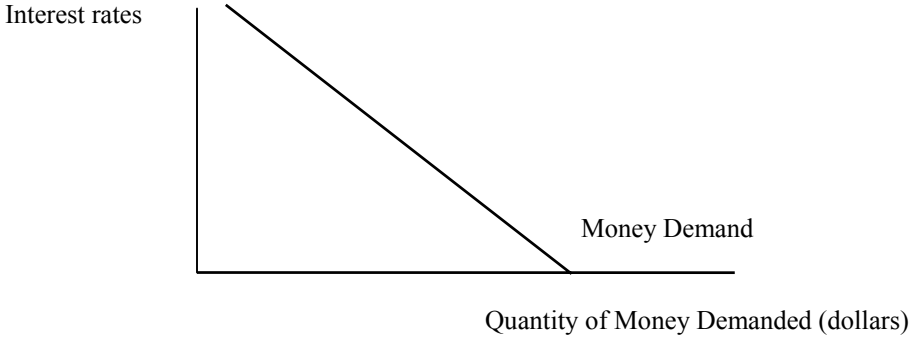
2) ***Discount Rate*** - Interest rate at which commercial banks can borrow from the fed. (DR)

3) ***Open Market Operations***
→ used most

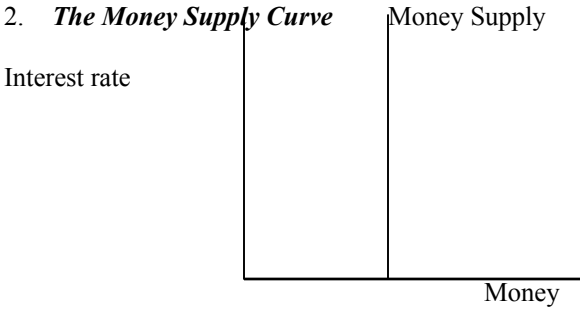
C. The Demand and Supply for Money

1. ***The Money Demand Curve***

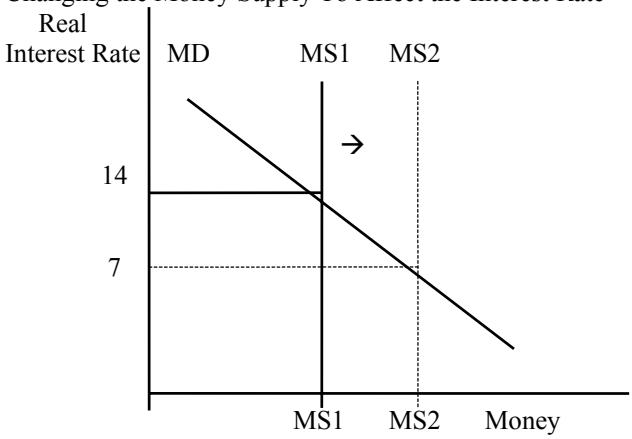
The ***Money demand curve*** shows the relationship between the level of interest rates in the economy and the stock of money (M1) demanded at a given point in time.



2. ***The Money Supply Curve***



3. Changing the Money Supply To Affect the Interest Rate



If the Fed wants to lower interest rates - it can expand the money supply.

To expand the money supply the fed can:

- reduce the reserve requirement
- cut the discount rate
- buy US government securities on the open market

III. AS/AD

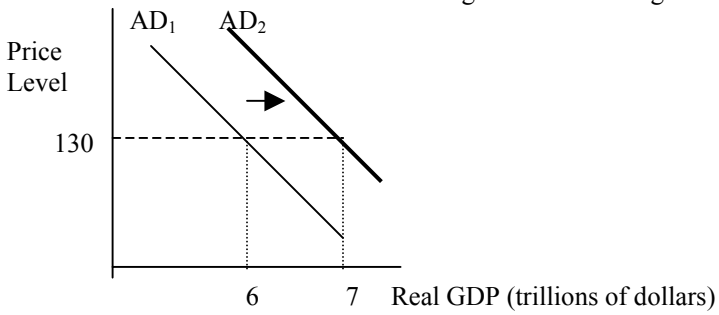
A. Aggregate Demand:

→ The total quantity of goods and services (real GDP) demanded by household, firms, government, and foreigners at different prices (C + I + G + NX demanded).

B. Changes in Aggregate Demand:

A change in Aggregate Demand shifts the Aggregate Demand Curve.

1) Real Interest Rates: MONETARY POLICY (federal reserve bank actions)
2) The Quantity of Money in Circulation: MONETARY POLICY
3) Changes in the international value of the dollar: INTERNATIONAL FACTORS
4) Wealth:
5) Government purchases, Taxes and Transfers: FISCAL POLICY (government actions)
6) Expectations about the future: (of firm's and people)
7) Income and other economic conditions affecting demand in foreign countries:



C. Aggregate Supply

AGGREGATE SUPPLY
Problem: We know that factor prices (i.e. wages) adjust more slowly than goods prices.

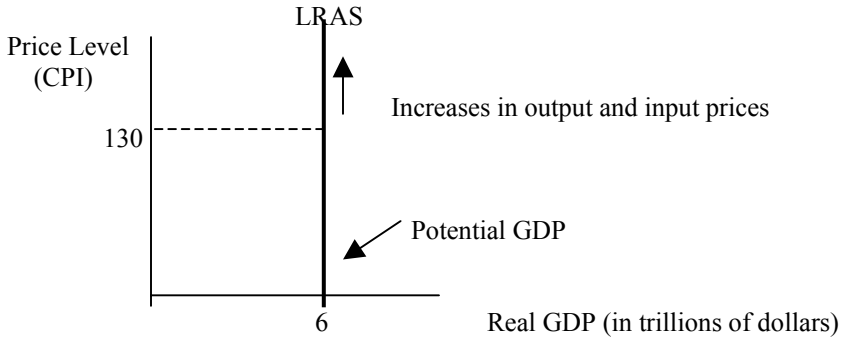
Therefore, we distinguish between two time periods for aggregate supply:

- Long Run Aggregate Supply
- Short Run Aggregate Supply

(1) LONG-RUN AGGREGATE SUPPLY (LRAS or LAS)

The "LONG RUN" in macroeconomics is the time it takes for ***all*** prices to adjust to bring the economy to the full employment level of output.
In the LONG-RUN, real GDP will always get pushed to potential GDP.

So the LONG-RUN AGGREGATE SUPPLY curve is ***vertical*** at ***potential GDP***



KEY: Remember that along the LRAS curve, all prices (INPUT AND OUTPUT) are changing by the same percentage amount.

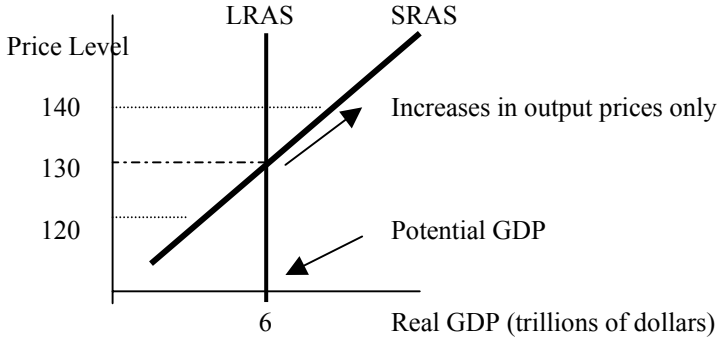
(2) SHORT-RUN AGGREGATE SUPPLY (SRAS)

- In the "short-run" we know that wages and the prices of other factors of production adjust more slowly than other output prices.

- Therefore, if input prices don't change, but output prices rise in the short-run firms HAVE AN INCENTIVE to increase total quantity of output (real GDP) supplied.

- Thus, the higher the price-level, the greater the quantity of real GDP supplied <u>in the short-run!</u>

(i.e. the short-run aggregate supply curve is upward sloping)



KEY: Remember, along the SRAS curve, ONLY OUTPUT PRICES are changing. FACTOR PRICES (wages) are CONSTANT!

D. Fiscal Policy and Policy Multipliers

- Fiscal Policy to Influence Aggregate Demand

(1) ***Expansionary Fiscal Policy***: is policy under which the government acts to stimulate (and thereby increasing) aggregate demand. Increasing spending or decreasing taxes, or both does this.

(2) ***Contractionary Fiscal Policy***: a policy under which the government acts to restrain (and thereby lowering) aggregate demand. Decreasing government spending or increasing taxes or both do this.

E. FISCAL POLICY and POLICY MULTIPLIERS

- We distinguish between two types of fiscal policy

(1) <u>Automatic Fiscal Policy</u> - policy that occurs "automatically" without any specific acts of congress.
ex. During a recession, tax revenues fall and transfer payments rise (unemployment)

(2) <u>Discretionary Fiscal Policy</u> - Policy initiated by an act of congress
ex. Change tax laws or approve new spending program

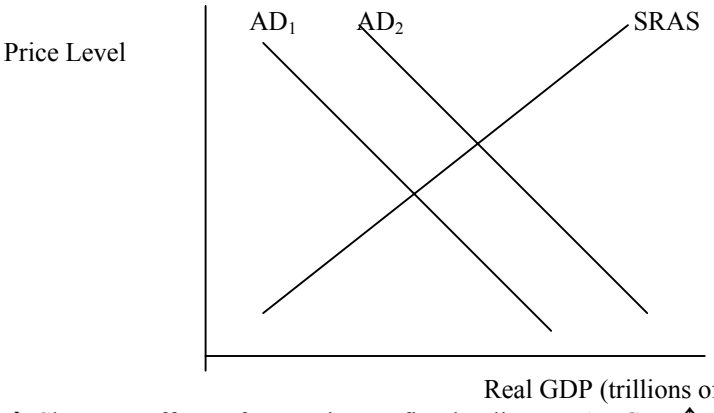
F. Effects of Fiscal Policy on the ECONOMY:

- We can use the AD/AS model to look at the short-run and long-run effects of fiscal policy.

SHORT RUN EFFECTS

- Any fiscal policy which increases AD is called ***expansionary fiscal policy***.
ex. Increase in government purchases or transfer payments or decrease in taxes.

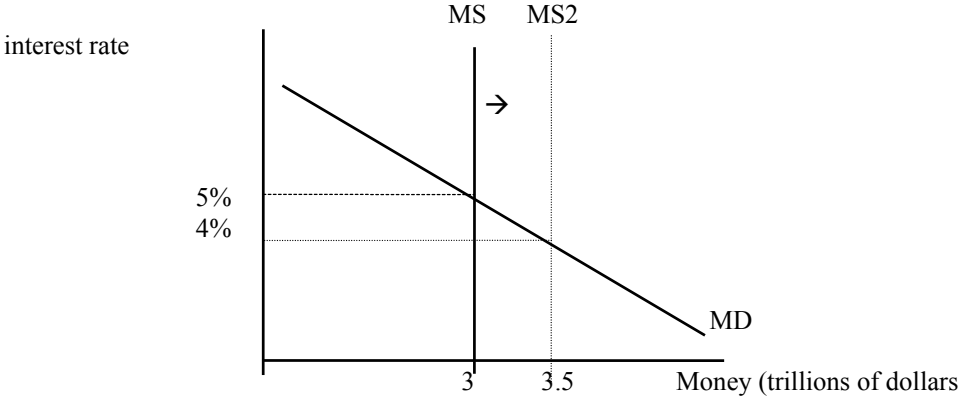
- ***Contractionary Fiscal Policy*** decreases AD



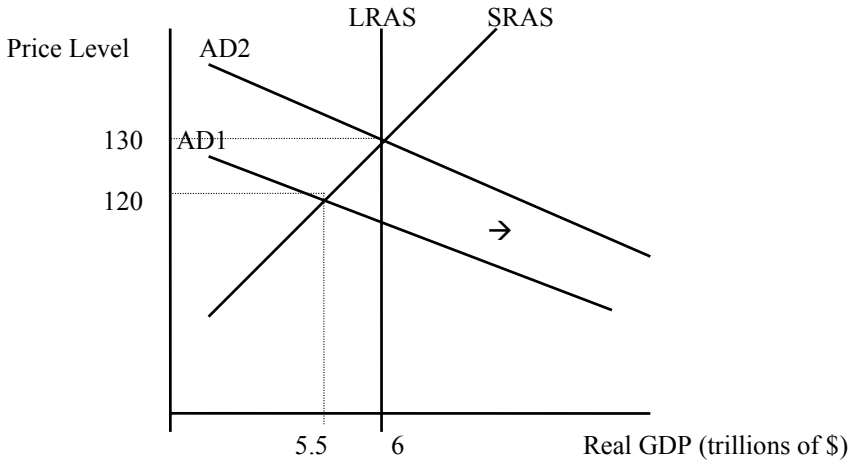
→ Short-run effects of expansionary fiscal policy, REAL GDP ↑ and price level ↑.

G. Monetary Policy and Aggregate Demand

(1) If fed wants to Increase AD, it takes action to increase money supply and lower interest rates:
ex. Lower discount rate or BUY government securities

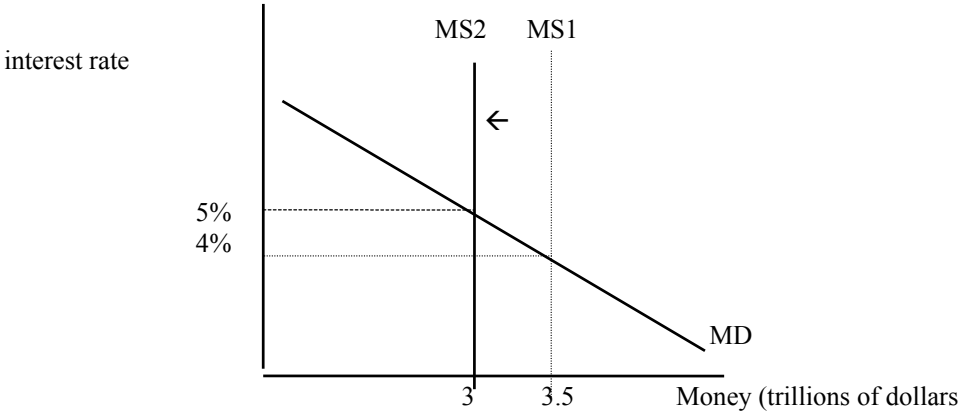


- Firms and consumers take advantage of low interest rates and increase investment and consumption; AD increases

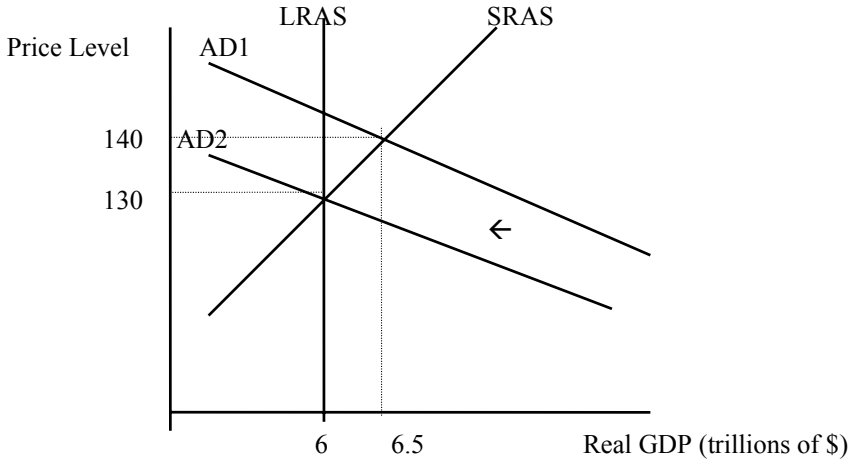


- Typical of action taken by Fed during a recession

(2) If Fed seeks to decrease AD, it takes action to decrease MS and raise interest rates
ex. Raise discount rate or SELL government securities



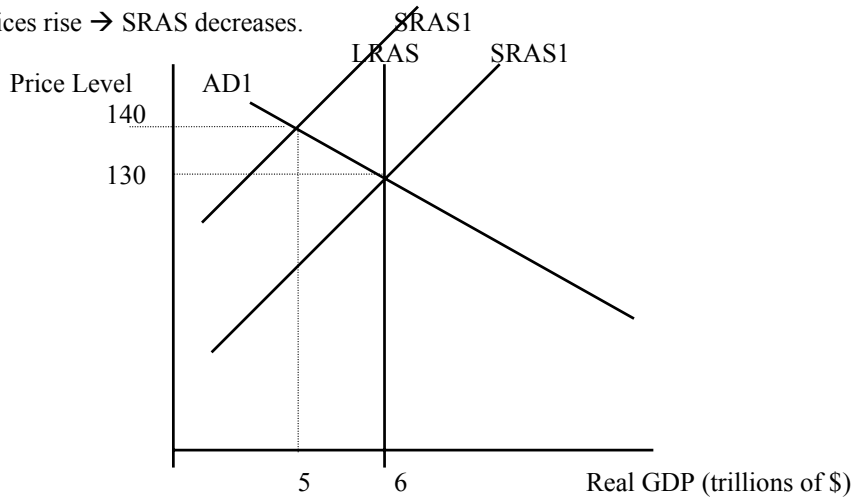
- Investment and consumption decrease in response to higher interest rates; AD decreases



- Typical of action take by fed during an expansion to avoid inflation

H. Changes in SR Aggregate Supply → oil price shocks

If oil prices rise → SRAS decreases.



- Initially, the **price level rises and production and employment falls.**

This combination is called ***STAGFLATION***.
Occurred during OPEC oil shocks in 1970.

- If AD doesn't change and oil prices remain high for some time, wages will begin to fall (because we're at less than full employment).
  → SRAS increases as wages fall, but this could take a LONG TIME

- Usually, government of the Fed tries to increase AD to offset the recession. This causes further increases in the price level and increases real GDP.