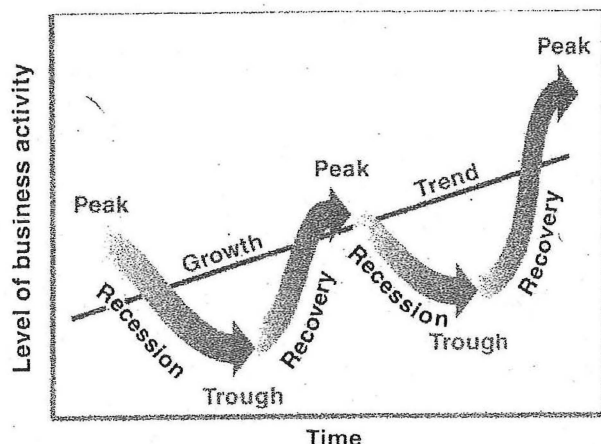
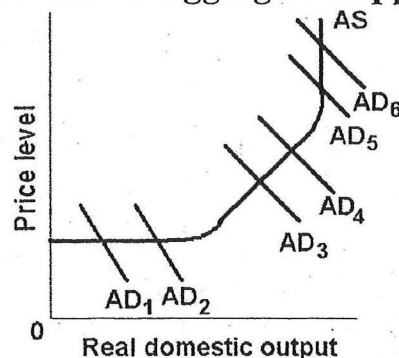


# Macroeconomics Key Graphs

## The Business Cycle



## Short-Run Aggregate Supply

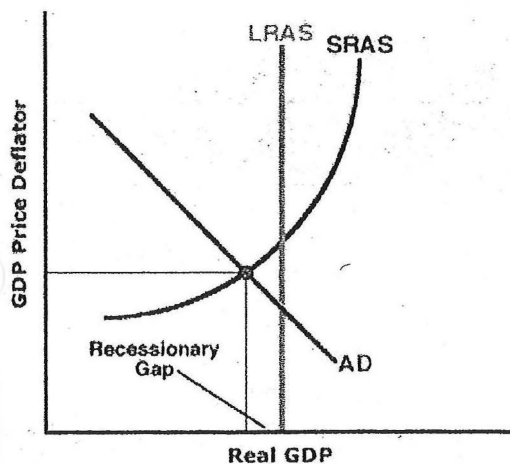


Keynesian Range: Sticky wages make AD perfectly elastic

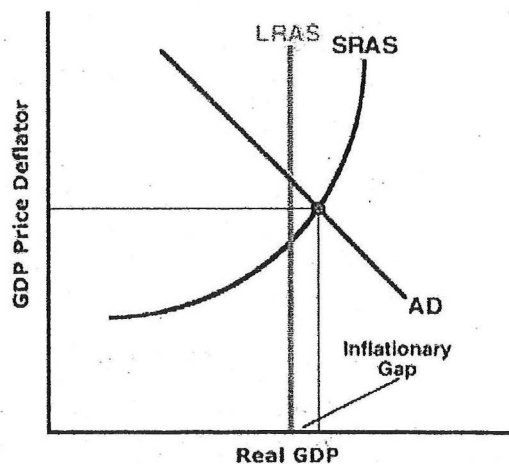
Intermediate Range: Upward sloping portion

Classical Range: At or near full employment and increase in AD results in high inflation. The car can't go faster

## Recessionary Gap



## Inflationary Gap



## Fiscal Policy

### Expansionary Tools-

1. Increase Government Spending
2. Decrease Taxes

### Contractionary Tools-

1. Decrease Government Spending
2. Increase Taxes

## Monetary Policy

### Expansionary Tools-

1. Buy bonds, securities, treasuries
2. Decrease reserve requirement
3. Decrease Discount rate

### Contractionary Tools-

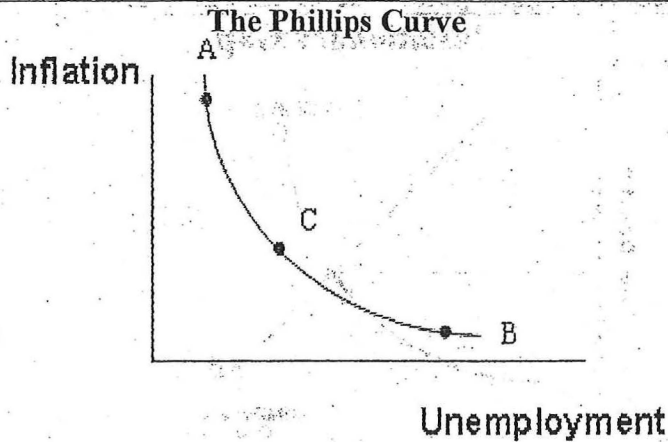
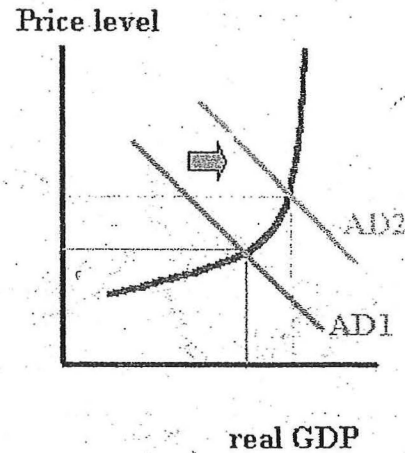
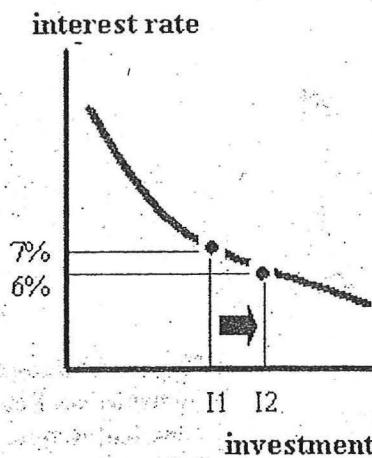
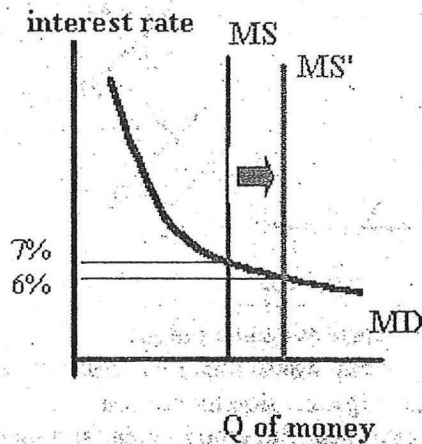
1. Sell bonds, securities, treasuries
2. Increase reserve requirement
3. Increase Discount rate

## Key Formulas:

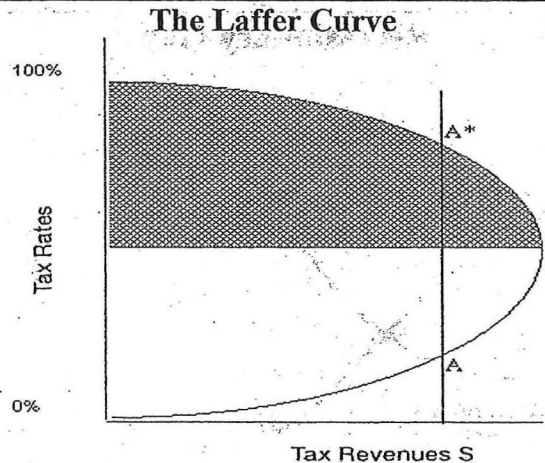
- $GDP = C + I + G + (\text{Exports} - \text{Imports})$
- $\text{Nominal GDP} = \text{Real GDP} \times \text{Price Index} / 100$
- $\text{Unemployment rate} = \text{Unemployed} / \text{Labor force}$
- $\text{Consumer Price Index} = \text{Price of Market Basket} / \text{Price of Base Year Market Basket} \times 100$
- $\text{Spending Multiplier} = 1 / \text{MPS}$
- $\text{Money/Monetary Multiplier} = 1 / \text{Reserve Requirement}$
- $\text{Nominal Interest Rate} = \text{Real Interest rate} + \text{Expected Inflation}$

### The Keynesian Three Step Transmission

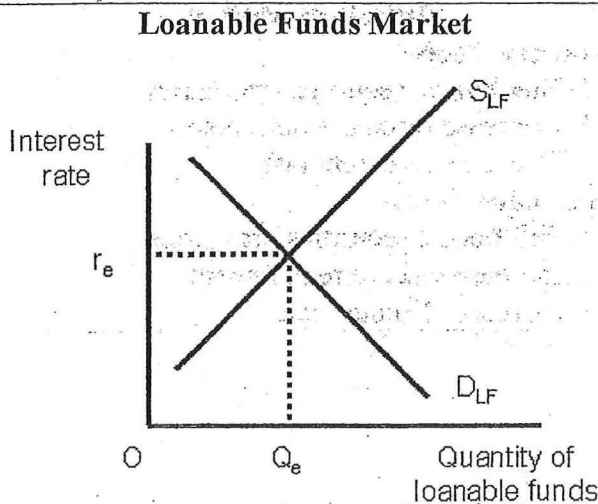
Shows the result of Monetary policy. An increase of the money supply causes interest rates to fall causing investment and consumption to increase. More investment and consumption increases AD and increases price level and output.



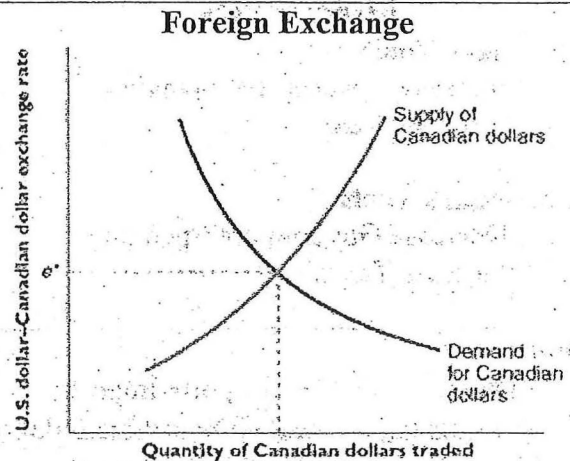
Shows tradeoffs between inflation and unemployment. To decrease inflation you will get some unemployment and vice versa.



Shows that a significant increase in the tax rate can decrease the incentive to work, causing a fall in tax revenue.



- Shows the supply and demand for loans and equilibrium sets the real interest rate.
- When the government borrows money to increase spending,  $D_{LF}$  increases causing interest rate to increase and investment to fall. This is CROWDING OUT.



- If demand for Canadian goods increases, the demand for Canadian dollars increases causing it to appreciate.
- If Canadians want a different currency the supply of Canadian dollars available to exchange increases.
- If the interest rate in Canada is significantly higher than the U.S., then Americans will demand more Canadian dollars to earn higher returns in Canadian banks. The Canadian dollar appreciates. The U.S. dollar depreciates.