

**Macrosim2 Homework Assignment**  
**Sensitivity of the Economy and Interest Rates to**  
**Budget Deficits and M2 (Money Supply) Growth**

A number of theoretical propositions are being promoted by this assignment:

- (1) Budget deficits, *considered in isolation*, have a tendency to cause interest rates to rise.
- (2) Expansionary monetary policy (shown in this model as an increase in the M2 growth rate) has a tendency to push rates down.
- (3) When both of these are working against each other, at least in the short run, which this model represents, the direction of interest rates will depend upon which of these two countervailing tendencies is strongest.

**Simulation 1 - Budget Deficits in isolation (point 2 above).**

Default government purchases are set at 40 in MS2. Increase government spending by 10% every year (TRIALS 1 through 4) and change nothing else.

(Government spending should be 40, 44, 48.40, 53.24, and 58.56. Don't round.).

What happens to the budget deficit? (By now this should be clearly understood).

What happens to the interest rate? Can you understand *why* this is happening?

Print your output and clear your screen.

**[continued]**

**Simulation 2 - Money Supply Growth in Isolation (point 3 above).**

Now set your M2 growth rate to 5% in TRIAL 1 and leave it at that level through all four simulations (you need do little more than hit the space bar through all trials once M2 is set in TRIAL 1). M2 in TRIAL 4 should be at about 61 if you did this right.

What happens to the interest rate? Can you understand why this is happening?

*Note: This simulation ignores the possible inflationary effects of the policy in question. If this simulation were inflationary, interest rates would be rising in response to the inflation. This model, which does not account for nor recognize inflation, is unable to show that.*

Print and clear your screen.

**Simulation 3 - Blended policy with one side dominant (point 4 above).**

Now blend Simulation 2 and Simulation 3. That is, set the M2 growth rate at 5% for TRIALS 1-4 and set government purchases at a 10% growth rate - 44, 48.40, 53.24, 58.56.

What happens to the interest rate? Which side is prevailing?

Print and clear your screen.

**Simulation 4 - Blended policy with the other side dominant (point 4 above).**

This time keep government purchases at the 10% growth rate, again using 44, 48.40, 53.24, and 58.56 (don't round - or round, and you'll see why I telling you not to round), but drop the M2 growth rate for each TRIAL year to 3%. The money supply is growing, from 50 to more than 56, and the deficit is larger, from 0.0 to about 7.5.

What is happening to interest rates?

Do you understand the four points made above?