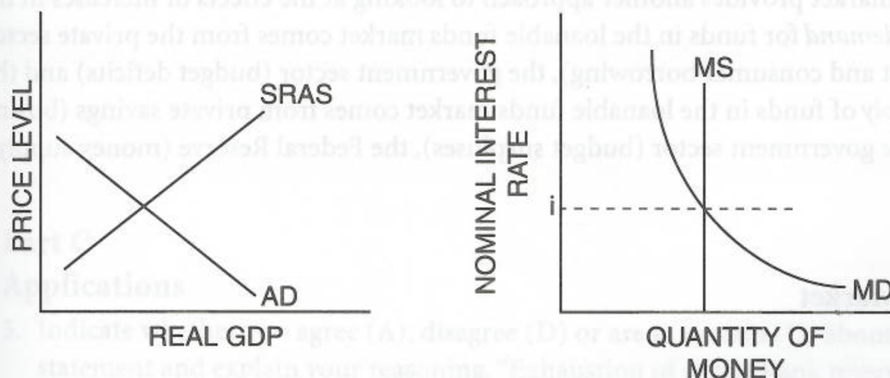
Crowding-Out: A Graphical Representation

Monetary policy and fiscal policy do not exist in separate airtight compartments. Monetary policy and fiscal policy can reinforce or accommodate each other, or they can work at cross-purposes. This activity assumes no changes in the foreign exchange rate, imports or exports.

For example, an expansionary fiscal policy will increase aggregate demand. The expansionary fiscal policy should also increase the demand for money. If the Fed does not increase the money supply, interest rates will rise. Because the government is borrowing money to finance its expansionary fiscal policy, consumers and businesses will be crowded-out of the financial markets. This could lower consumer and investment spending and slow down the economic expansion. On the other hand, if the Fed increases the money supply, interest rates should not rise as much. Of course, increasing the money supply will increase the price level further.

Part A
Using Aggregate Demand and Aggregate Supply Analysis

Figure 44.1
Crowding-Out Using Aggregate Demand and Aggregate Supply Analysis



1. Assume fiscal policy is expansionary and monetary policy keeps the stock of money constant at MS. Shift one curve in each graph to illustrate the effect of the fiscal policy.

   (A) Which curve did you shift in the short-run aggregate demand and aggregate supply graph? What happens as a result of this new curve?

   (B) In the money market graph, which curve did you shift to demonstrate the effect of the fiscal policy? What happens as a result of this shift?

Adapted from Phillip Saunders, *Introduction to Macroeconomics: Student Workbook*, 18th ed. (Bloomington, Ind., 1998). Copyright 1998 Phillip Saunders. All rights reserved. Activity revised by Rae Jean B. Goodman, U.S. Naval Academy, Annapolis, Md.

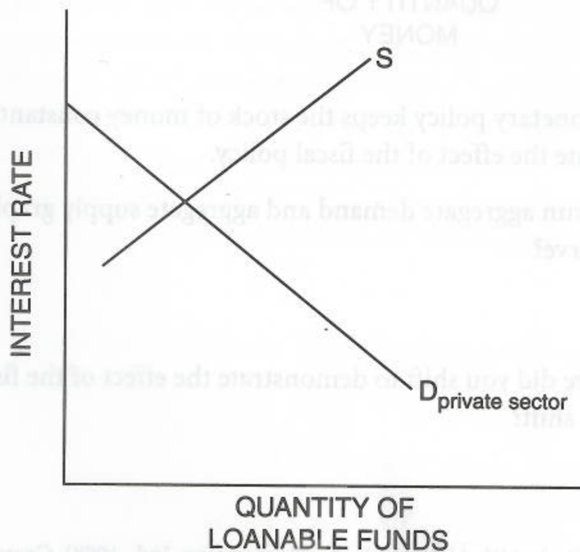
(C) Given the change in interest rates, what happens in the short-run aggregate supply and aggregate demand graph?

(D) How could a monetary policy action prevent the changes in interest rates and output you identified in (B) and (C)? Shift a curve in the money market graph, and explain how this shift would reduce crowding-out.

Part B
Using the Loanable Funds Market

The loanable funds market provides another approach to looking at the effects of increases in the budget deficit. The *demand* for funds in the loanable funds market comes from the private sector (business investment and consumer borrowing), the government sector (budget deficits) and the foreign sector. The *supply* of funds in the loanable funds market comes from private savings (businesses and households), the government sector (budget surpluses), the Federal Reserve (money supply) and the foreign sector.

Figure 44.2
Loanable Funds Market



2. Shift one of the curves on Figure 44.2 to indicate what occurs in the loanable funds market if government spending increases without any increases in tax revenue or the money supply.

   (A) What happens to the interest rate as a result of this expansionary fiscal policy? Explain.

   (B) Indicate on the graph the new quantity of private demand for loanable funds.

   (C) An accommodating monetary policy could prevent the effects you described in (A) and (B). Shift a curve in the diagram to show how the accommodating monetary policy would counteract the effects of crowding-out. Explain what would happen to interest rates and the level of private demand for loanable funds as a result of this new curve.

Part C
Applications

3. Indicate whether you agree (A), disagree (D) or are uncertain (U) about the truth of the following statement and explain your reasoning. "Exhaustion of excess bank reserves inevitably puts a ceiling on every business boom because without money the boom cannot continue."

Answer the questions that follow each of the scenarios below.

4. The Federal Reserve Open Market Committee wishes to accommodate or reinforce a contractionary fiscal policy.

   (A) Would the Fed buy bonds, sell bonds or neither?

   (B) What effect would this policy have on bond prices and interest rates?

   (C) What effect would this policy have on bank reserves and the money supply?

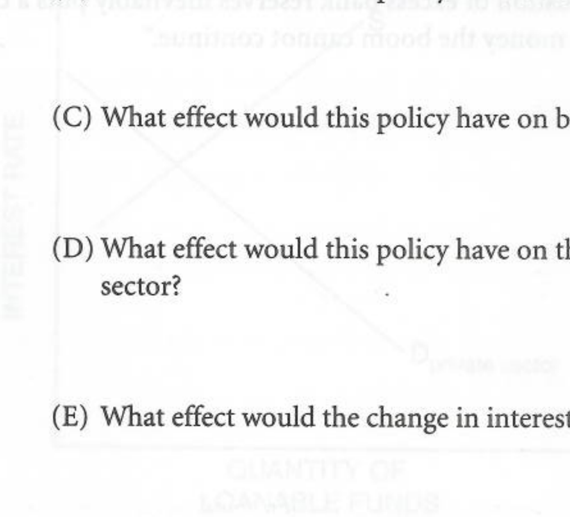
   (D) What effect would this policy have on the quantity of loanable funds demanded by the private sector?

   (E) What effect would the change in interest rates you identified in (B) have on aggregate demand?

5. The Federal Reserve Open Market Committee wishes to accommodate or reinforce an expansionary fiscal policy.

   (A) Would the Fed buy bonds, sell bonds or neither?

   (B) What effect would this policy have on bond prices and interest rates?



   (C) What effect would this policy have on bank reserves and the money supply?

   (D) What effect would this policy have on the quantity of loanable funds demanded by the private sector?

   (E) What effect would the change in interest rates you identified in (B) have on aggregate demand?

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