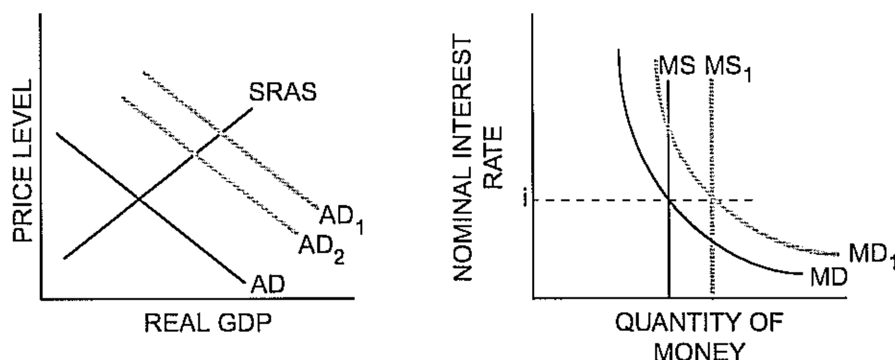
Crowding-Out: A Graphical Representation

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? ***Shift the aggregate demand curve to AD_1, as a result of the expansionary fiscal policy. The price level and real GDP both increase.***

   (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? ***Shifted the money demand curve to the right; money demand increased because real GDP increased. Interest rates rise.***

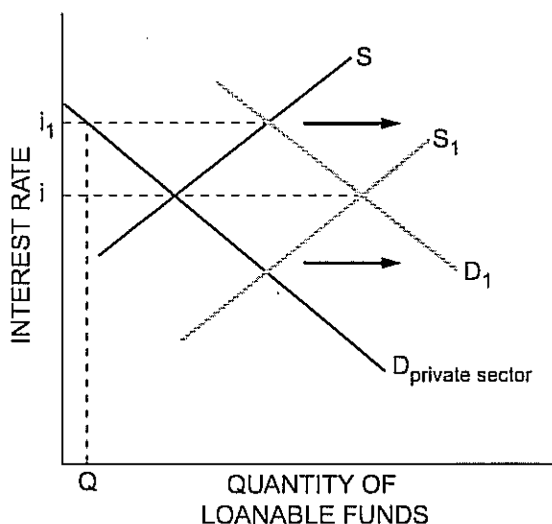
(C) Given the change in interest rates, what happens in the short-run aggregate supply and aggregate demand graph? ***Aggregate demand shifts back to AD_2 because the increase in interest rates reduces some private domestic investment and interest-sensitive consumer spending. This is crowding-out.***

(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. ***Shift the money supply curve to MS_1. If the money supply is increased to MS_1, interest rates would move back to i. If interest rates are at i, there would be no crowding-out (or reduction) of investment spending, and the aggregate demand would be AD_1.***

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



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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. *The demand increases, shifting the demand curve to D_1. D_1 represents the private plus public demand for loanable funds.*

   (A) What happens to the interest rate as a result of this expansionary fiscal policy? Explain. *There is an increase in the demand for loanable funds to pay for the increased government spending. The interest rate rises to i_1.*

   (B) Indicate on the graph the new quantity of private demand for loanable funds. *At the higher interest rate (i_1), the level of private demand for loanable funds is Q.*

   (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. *If the monetary authorities expanded the money supply to keep interest rates constant at the original level, a larger quantity of loanable funds would be available, and there would be no crowding-out. The new supply curve is S_1, interest rates return to i and the private sector receives the original level of loanable funds.*

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." *Uncertain. The answer depends on the assumptions that are made. The boom could continue to grow if the velocity of circulation increases. Increased demand for a fixed money stock would tend to increase interest rates, and increased velocity is associated with higher interest rates. However, the higher interest rates could cause investment to decrease and slow economic growth.*

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? *Sell bonds.*

   (B) What effect would this policy have on bond prices and interest rates? *Bond prices would decrease, and the interest rate would increase.*

   (C) What effect would this policy have on bank reserves and the money supply? *Bank reserves would decrease, and the money supply would decrease.*

   (D) What effect would this policy have on the quantity of loanable funds demanded by the private sector? *The bond sale would decrease the supply of loanable funds; the increase in the interest rate would decrease the quantity demanded of loanable funds (movement along the demand curve).*

   (E) What effect would the change in interest rates you indentified in (B) have on aggregate demand? *Aggregate demand would decrease because the higher interest rates would curtail the interest-sensitive components of consumption and investment.*

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? *Buy bonds.*

   (B) What effect would this policy have on bond prices and interest rates? *The price of bonds would increase, and the interest rate would decrease.*

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

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

   (E) What effect would the change in interest rates you identified in (B) have on aggregate demand? *Aggregate demand would increase because of the lower interest rates and the resulting increase in interest-sensitive components of consumption and investment.*

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