

Fiscal and monetary policy effects

In the long run, saving supply and investment demand determine the real interest rate in global financial markets.

The expected inflation rate is determined by actual inflation experience, which in turn depends on the growth rate of the quantity of money that results from the Bank of Canada's actions.

So in the long run, the Bank of Canada influences the nominal interest rate by the effects of its policies on the inflation rate. But it does not directly control the nominal interest rate, and it has no control over the real interest rate.

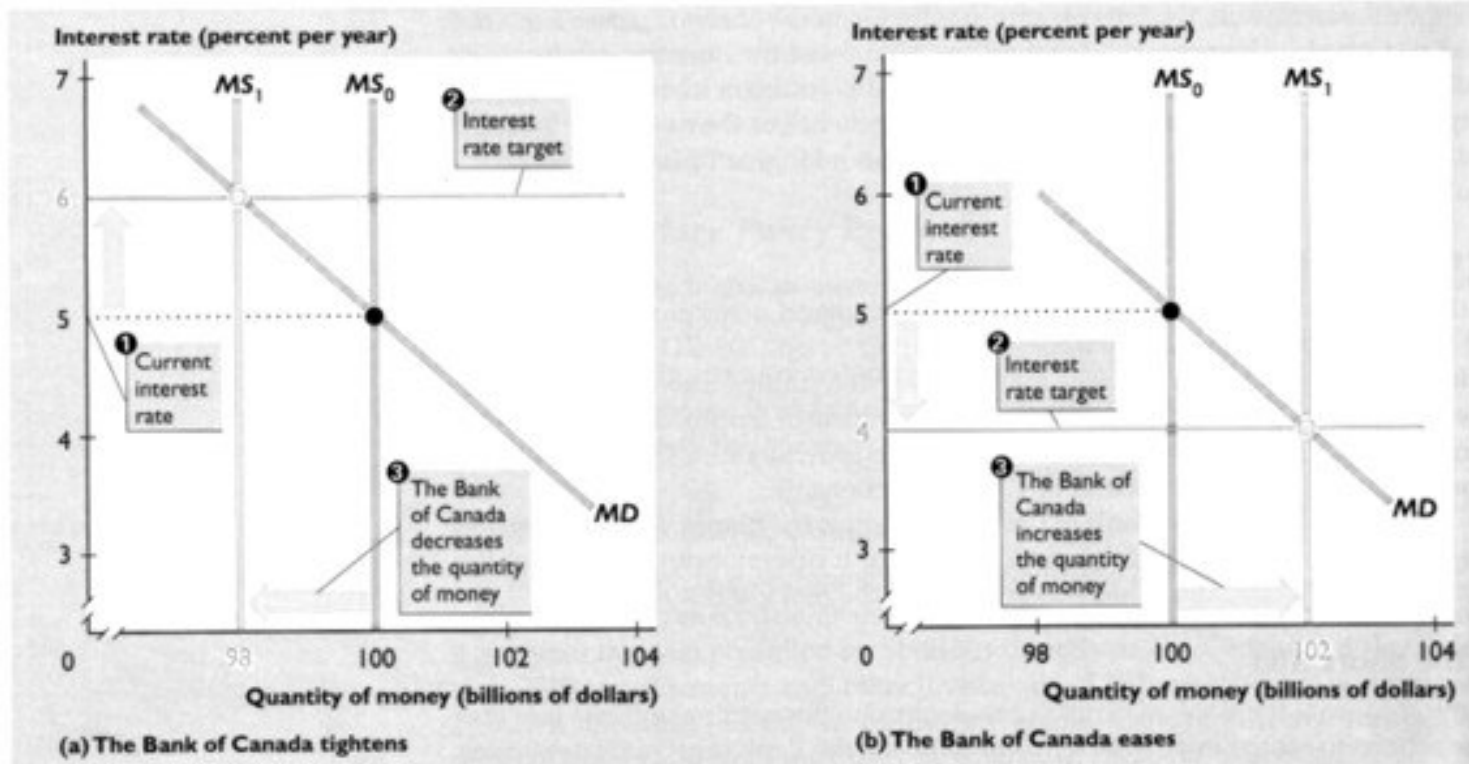
In the short run, the Bank of Canada can determine the nominal interest rate and take actions to set the overnight rate. But to do so, the Bank must undertake open market operations that change the quantity of money. It is by changing the quantity of money that the Bank of Canada achieves its target for the nominal interest.

How the Bank of Canada raises the interest rate?

Suppose that the Bank of Canada fears inflation and decides to take action to decrease aggregate demand. The Bank of Canada announces that it will raise the short-term interest rate. How does the Bank achieve this goal?

The Bank sells government securities in the open market. This action mops up bank reserves. Some banks are short of reserves and seek to borrow reserves from other banks. The overnight rate rises. With fewer reserves, the banks make a smaller quantity of new loans each day until the quantity of loans outstanding has fallen to a level that is consistent with the new lower level of reserves. The quantity of money decreases.

The demand for money determines the quantity of money that will achieve the Bank of Canada's interest rate target. The Bank could, if it chose, fix the quantity of money and let the interest rate adjust the quantity of money to the level that makes the chosen interest rate the equilibrium rate.



1 The current interest rate is 5 percent a year, and 2 the Bank of Canada's target is 6 percent a year. To raise the interest rate to the target, the Bank of Canada must sell securities in the open market and 3 decrease the quantity of money to \$98 billion.

1 The current interest rate is 5 percent a year, and 2 the Bank of Canada's target is 4 percent a year. To lower the interest rate to the target, the Bank of Canada must buy securities in the open market and 3 increase the quantity of money to \$102 billion.

How the Bank of Canada lowers the interest rates.

If the bank fears recession, it acts to increase aggregate demand.

The Bank buys securities in the open market. This action increases bank reserves. Banks now seek to lend reserves to other banks. With more reserves, the banks increase their lending and the quantity of money increases.

The ripple effects of the Bank of Canada's actions

Suppose that the Bank increases the interest rate. What happens next?

Three main events follow:

- Investment and consumption expenditure decrease
- The Canadian dollar rises, and net exports decrease.
- A multiplier process induces a further decrease in consumption expenditure and aggregate demand.

The dollar and net exports

A rise in the interest rate, other things remaining the same, means that the Canadian interest rate rises relative to the interest rates in other countries. Some people will want to move funds into Canada from other countries to take advantage of the higher interest rate that they can now earn on Canadian bonds.

When people move money into Canada, they buy Canadian dollars and sell other currencies, such as U.S. dollars or Japanese yen. With more Canadian dollars demanded, the price of the Canadian dollar rises.

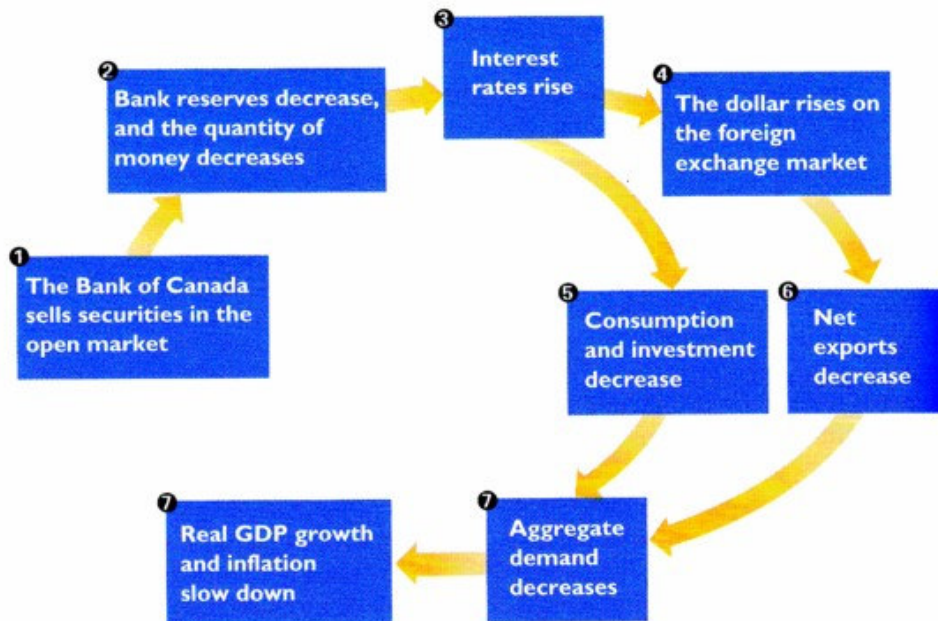
The higher price of the Canadian dollar means that foreigners must now pay more for Canadian-made goods and services. So the quantity demanded and the expenditure on Canadian-made items decreases. Canada's exports decrease.

The multiplier process.

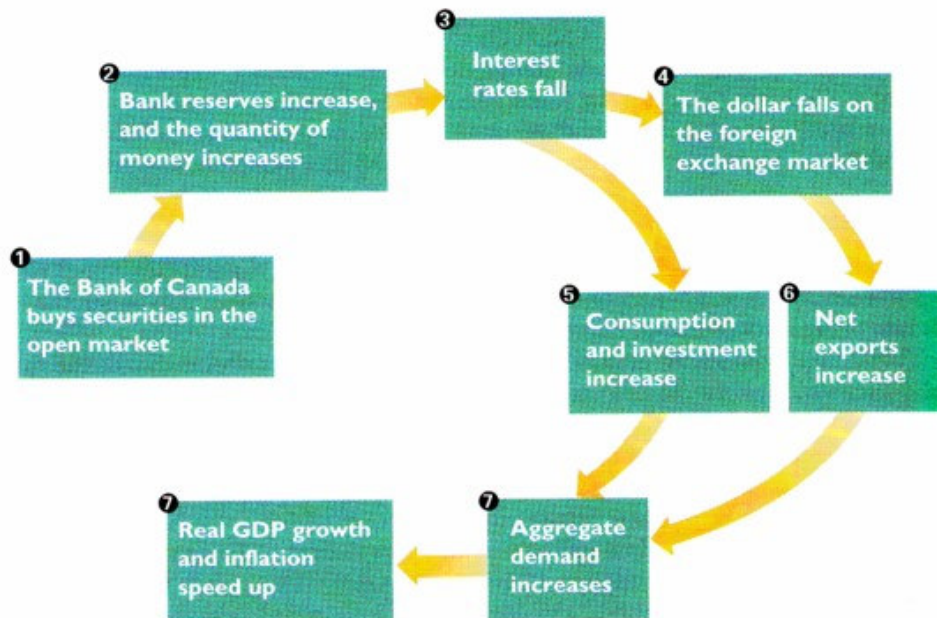
Taking these effects together, investment, consumption expenditure, and net exports are all interest-sensitive components of expenditure.

So a rise in interest rate brings a decrease in aggregate expenditure, which decreases incomes, and the decrease in income induces a decrease in consumption expenditure. The decreased consumption expenditure lowers aggregate expenditure. Real GDP and disposable income decrease further, and so does consumption expenditure. Real GDP growth slows, and the inflation rate slows.

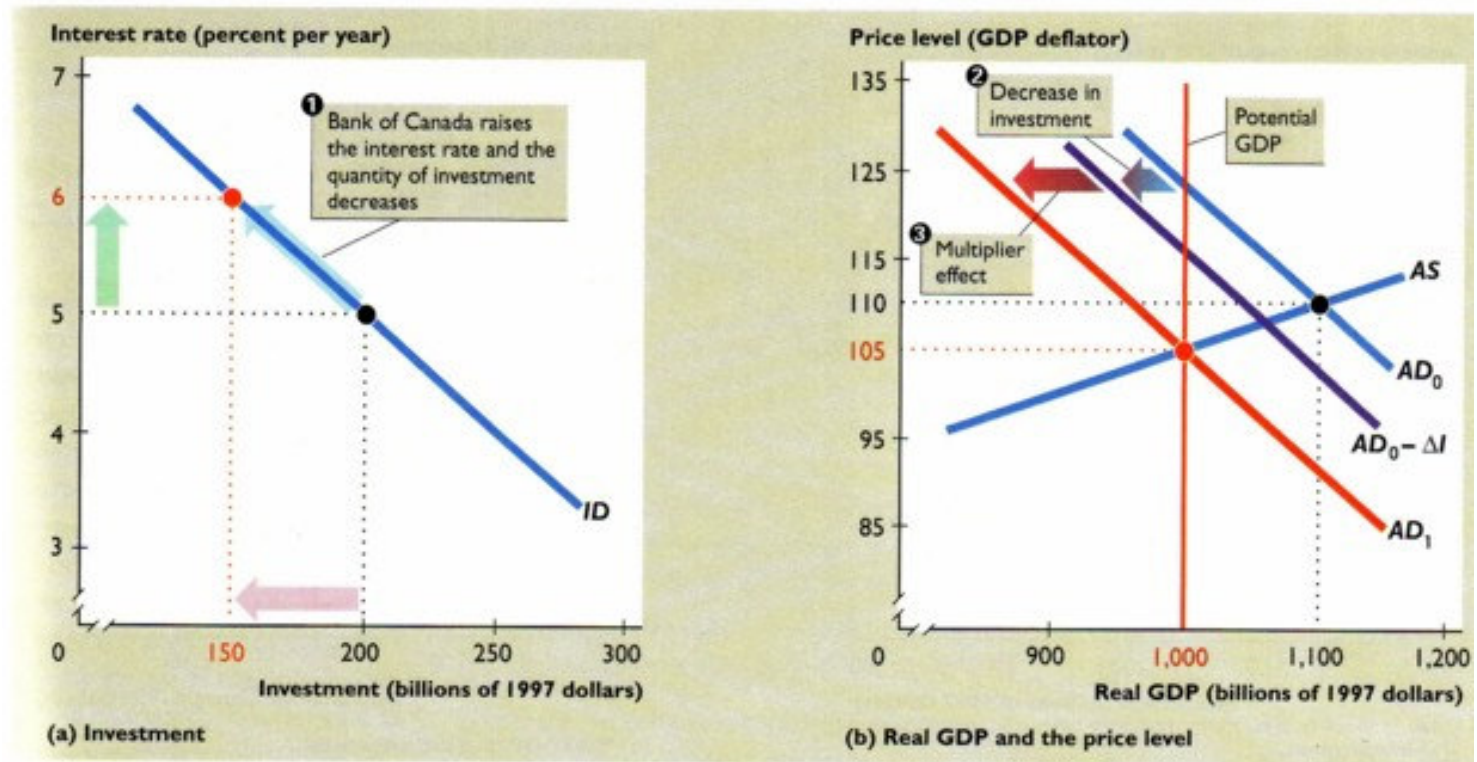
If the Bank lowers the nominal interest rate, the events just described occur in the opposite directions, so real GDP growth and the inflation rate speed up.



(a) The Bank of Canada tightens

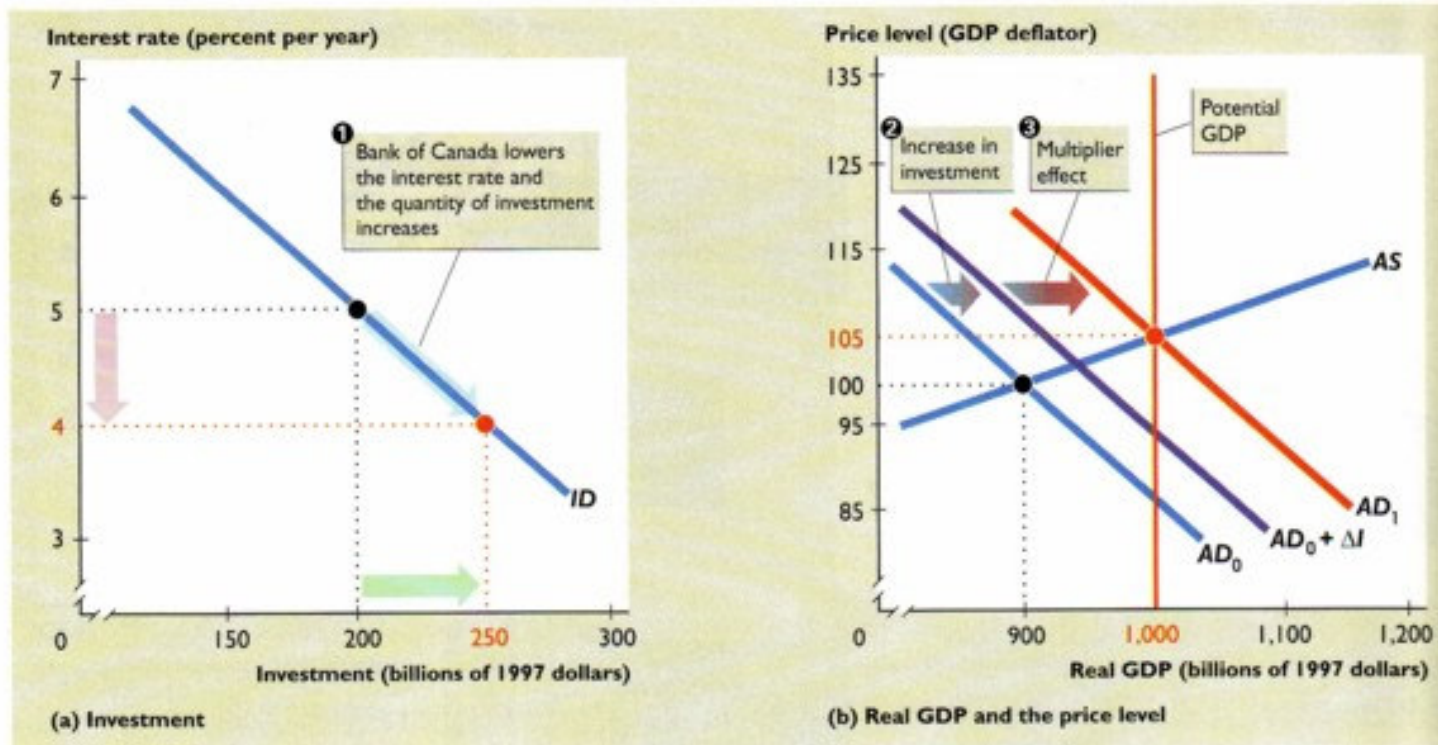


(b) The Bank of Canada eases



Real GDP exceeds potential GDP (part b). To avoid inflation,
 ① the Bank of Canada raises the interest rate (part a).
 ② Expenditure decreases by ΔI , and ③ the multiplier induces

additional expenditure cuts. The aggregate demand curve shifts to AD_1 . Real GDP decreases to potential GDP, and inflation is avoided.



Real GDP is less than potential GDP (part b). To avoid a recession, ❶ the Bank of Canada lowers the interest rate (part a). ❷ Expenditure increases by ΔI , and ❸ the multiplier induces additional expenditure.

The aggregate demand curve shifts to AD_1 . Real GDP increases to potential GDP, and the recession is avoided.

Exercises

1. Suppose that the government of Canada increases its expenditure on highways and bridges by \$5 billion in 2002. Explain the effect that this expenditure would have on:
 - a. Autonomous expenditure.
 - b. Aggregate demand.
 - c. Real GDP.
 - d. Induced transfer payments.
 - e. The government's budget surplus.
2. Suppose that the Bank of Canada forecasts a recession in the near future. What change in monetary policy will avoid a recession? Explain the effect of the Bank of Canada's policy on:
 - a. Interest rates.
 - b. The quantity of money.
 - c. Investment.
 - d. The foreign exchange value of the Canadian dollar.
 - e. Aggregate demand.
 - f. The price level.
3. Explain why monetary policy is used more often than fiscal policy to stabilize the economy.
4. Explain the effect of a decrease in the quantity of money on aggregate demand. What determines how big the change in aggregate demand will be?
5. If the government of Canada wanted to increase investment, would the government change its own fiscal policy or encourage the Bank of Canada to change its monetary policy? Explain why. What effect would the policy change have on the price level?
6. If the government of Canada wanted to increase exports, would it change its own fiscal policy or encourage the Bank of Canada to change its monetary policy? Explain why. What effect would the policy change have on the composition of aggregate expenditure?