I love the Case & Fair textbook but it is out of date with how monetary policy works today. Please use this handout to supplement the chapter on monetary policy. The textbook assumes that the Federal Reserve (Fed) uses a money supply target. A money supply target model is appropriate in the 1960s through 1980s, but current monetary policy uses an interest rate target. The handout will compare and contrast the differences and similarities between a money supply target and interest rate target.

Definitions and terminology

What are you talking about when you say "money supply target" and "interest rate target"?

I am referring to the goals of the Fed's monetary policy tools. Recall that the Fed has three tools to change its monetary policy:

1. Change the required reserve requirement ratio
2. Change the discount rate
3. Change the federal funds rate (through the buying and selling of bonds)

A money supply target means that the Fed uses its tools **in order to** reach a certain money supply level in the economy.

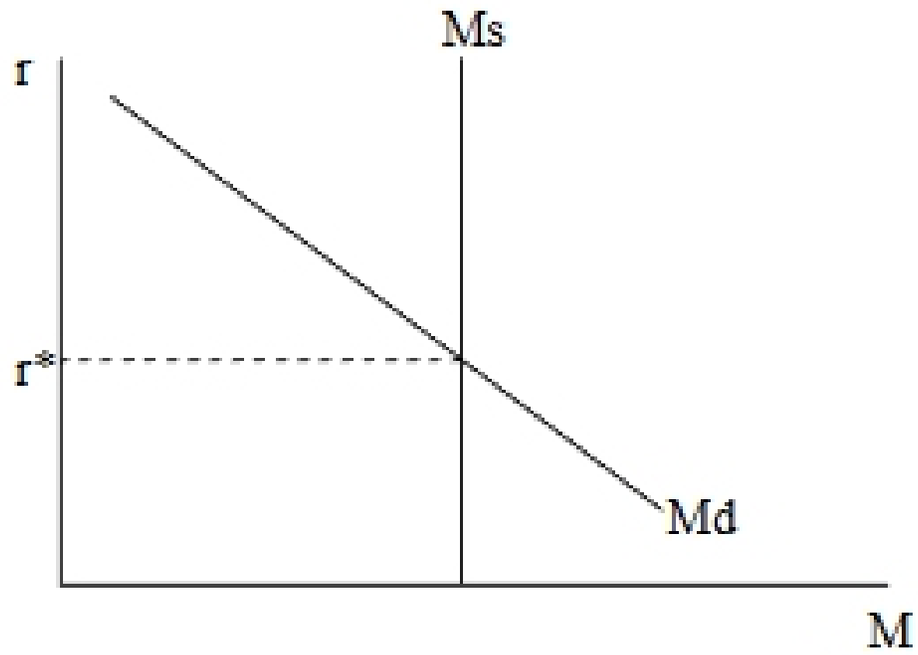
An interest rate target means that the Fed uses its tools **in order to** reach a certain interest rate in the economy.

The Fed rarely changes the reserve requirement ratio and discount rate. Hence, for the purposes of this handout, we are only concerned about the buying the selling of bonds (i.e. Federal Open Market Transactions).

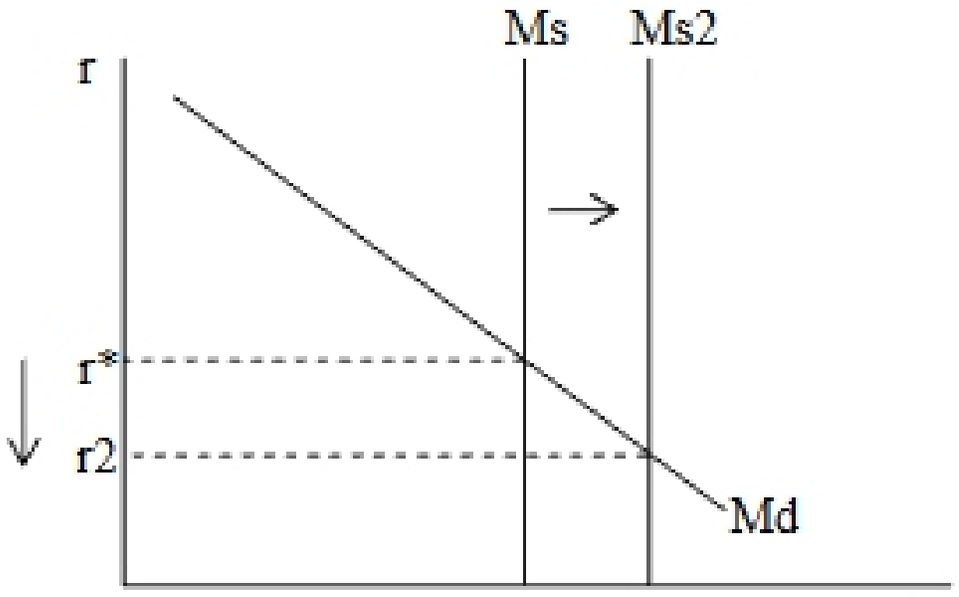
Shift from Money Supply Target to Interest Rate Target

Why did the Fed switch from targeting the money supply to targeting the interest rate?

If we assume that the Fed has complete control over the money supply, then the equilibrium interest rate is determined by the money market (where money demand = money supply).



Lets pretend that the Fed changes its money supply target from $9 trillion to $9.5 trillion. Hence the Fed will buy bonds and expand the money supply until the money supply reaches $9.5 trillion. This is a money supply target: the Fed uses its tools to reach a certain level of money in the economy.

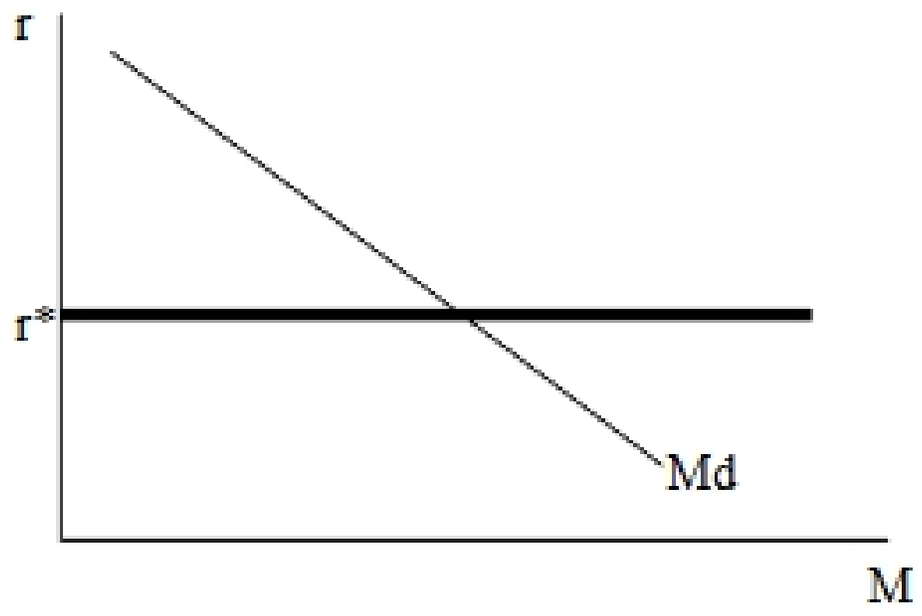


The equilibrium interest rate falls when the Fed expands its money supply target. An increase in the money supply aimed at increasing aggregate output (Y) is called **expansionary monetary policy**. The Federal Open Market Committee (FOMC) basically buys bonds which raises the price of bonds and expands the money supply which results in a lower rate of return on bonds and lower interest rates.

But the Fed realized that a money supply target is difficult and costly to maintain in a world with high financial integration. In other words, the Fed began to lose control of the money supply as financial integration increased. If the Fed wanted to maintain a money target today, then it would have to persistently monitor and intervene in the bond markets to fix the money supply at the target level. Hence the Fed switched to an **interest rate target**.

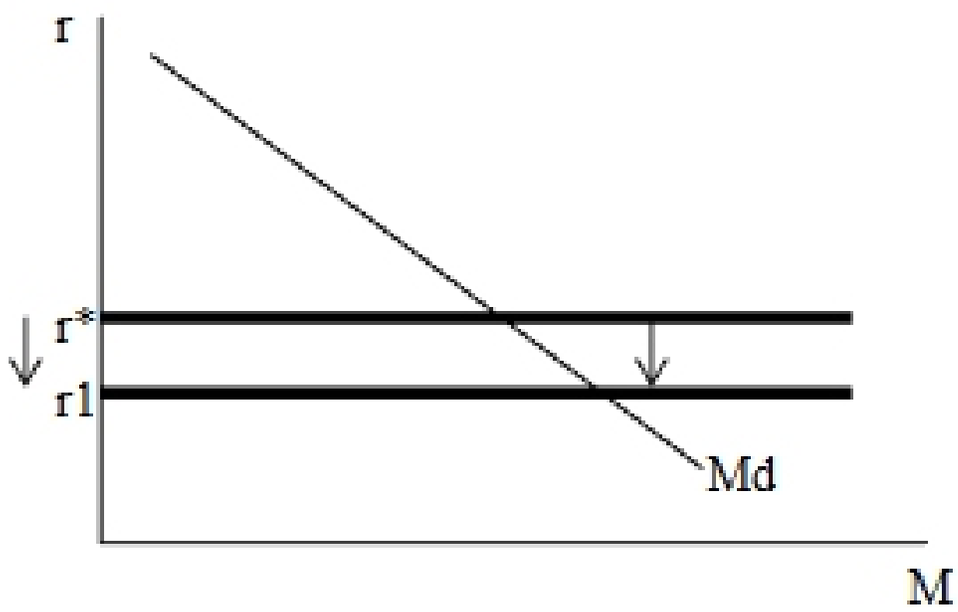
Interest Rate Target and Money Market

If the Fed's interest rate target is at r*, then the money market would look like the following:



Even though I did not draw in a vertical money supply curve, it is still there. But since the Fed is using an interest rate target, then we are not concerned about the position of Ms because the Fed will use its tools to maintain the interest rate at the target interest rate (r*).

Lets assume that the Fed lower its interest rate target from r* to r1. The money market graph would show the horizontal line shift down from r* to r1.



FOMC buys bonds which raises the price of bonds which lowers the rate of return of bonds which lowers the interest rate.

Remember that the interest rate effects of monetary policy do NOT change between a money supply target and interest rate target. The FOMC is still expanding Ms when it buys bonds.

Graphically speaking, the difference between a money supply target and an interest rate target is the horizontal lines (interest rate target) and the vertical lines (money supply target).

Conceptually speaking, there is a BIG difference between a money supply target and an interest rate target. Here are the two big differences:

1. The closed-economy government spending multiplier is smaller than (1/(1-mpc)) if the Fed maintains a money supply target. Because when G goes up, PAE goes up, Y goes up due to the multiplier effect. But when Y goes up, Md goes up because the economy demands more money to spend their additional income, when Md goes up, then r goes up. A higher interest rate reduces investment spending and reduces PAE and reduces Y. We call this the **crowding-out effect**. Hence Y increases by LESS THAN the increase in G times the multiplier.
2. The Fed destroys the crowding-out effect (in the short-run) by using an interest rate target. The closed-economy government spending multiplier is (1/(1-mpc)) if the Fed maintains an interest rate target. Because when G goes up, PAE goes up, Y goes up due to the multiplier effect. But when Y goes up, Md goes up because the economy demands more money to spend their additional income, LUCKILY the Fed expands Ms such that r is UNCHANGED! Hence Y increases by the increase in G times the multiplier.

Bond Markets

The most-used tool to affect the interest rate and/or change the money supply is open market transaction (i.e. the buying and selling of bonds). The buying and selling of bonds always have the same effects on money supply and interest rates. Hence, you will almost always answer questions about the bond markets using the same logic and graphs whether or not the Fed uses a money supply target or interest rate target.

FOMC Action	Bond Price Effects	Money Supply Effects	Interest Rate Effects	Y Effects
Buy bonds	Increase	Increase	Decrease	Increase
Sell bonds	Decrease	Decrease	Increase	Decrease