Chapter 5

This is Macroeconomics

Fiscal Policy by Congress and Monetary Policy by the Federal Reserve (The FED)

review for the exam

1. this chapter is about how Congress handles **fiscal policy**- <u>the spending, borrowing, and taxation decisions taken by governments</u> and how the FED uses **monetary policy** to stabilize an economy and to lessen the negative or excessive economic fluctuations that can weaken an economy, like employment, inflation, or real GDP that is too high or too low

Introduction (cont.)

1. fiscal policy is referred to as **supply-side policy** because it focuses on increasing long-term economic growth of aggregate supply (AS) (potential GDP)
   A. the primary tools that Congress uses to influence aggregate supply/ potential GDP (AS/GDP) are 1) government spending/expenditures and 2) taxes

Fiscal Policy: Supply-Side Policy

1. when the U.S. economy is in a recession/in contraction, Congress can use **expansionary fiscal policy** to increase real GDP/economic output by increasing government (G) spending/expenditures and/or lowering taxes to increase the money supply and expand the economy
2. when the U.S. economy is in expansion/with inflation, Congress can use **contractionary fiscal policy** to decrease real GDP/economic output by decreasing government (G) spending/expenditures and/or increasing taxes to decrease the money supply and contract the economy

Fiscal Policy: Supply-Side Policy (cont.)

Actions by Congress that reduce unemployment and increase GDP (reverse a recession)

- Increase government spending
- Decrease taxes (increasing disposable income)
- Combinations of the two

Actions by Congress that reduce inflation and decrease GDP (reverse expansion)

- Decrease government spending
- Increase taxes (decreasing disposable income)
- Combinations of the two

Discretionary Fiscal Policy

1. **discretionary fiscal policy** refers to specific changes in laws or administrative procedures, such as a change in an existing program to speed up spending, the creation of a program (such as a new welfare program), or a change in the tax system (such as lower tax rates)
   A. these changes in the law are discretionary changes because they require action on the part of the Congress or the President

Non-discretionary Fiscal Policy

1. many of the very large changes in government taxes and spending are automatic
   A. unemployment compensation, Social Security payments, and welfare payments all rise in a recession
      i. these automatic tax and spending changes are called **automatic stabilizers** or **non-discretionary fiscal policy** because they tend to stabilize the fluctuations of real GDP

Monetary Policy: Demand-Side Policy

1. now we'll talk about **monetary policy** which are the actions taken by the Federal Reserve (the FED) to increase the money supply in an economy when the economy is in contraction/in recession or decrease the money supply when an economy is in expansion/has inflation
2. monetary policy is referred to as **demand-side policy** because it focuses on increasing aggregate demand/real GDP (AD/Y)
   A. the primary tools that the FED uses to influence aggregate demand/real GDP are 1) bonds/securities, 2) the discount rate, and 3) the required reserve rate

Monetary Policy: Demand-Side Policy (cont.)

1. when the U.S. economy is in a recession/in contraction, the FED can use **expansionary monetary policy** to increase real GDP/real output by buying government bonds/securities from banks and/or decreasing the discount rate or required reserve rate
   A. this will increase the money supply, decrease interest rates, and expand the economy
2. when the U.S. economy is in expansion/has inflation, the FED can use **contractionary monetary policy** to decrease real GDP/real output by selling government bonds/securities to banks and/or increasing the discount rate or required reserve rate
   A. this will decrease the money supply, increase interest rates, and contract the economy

The FED

1. governments, usually through a central bank, control the money supply
2. a **central bank** is the main bank to other banks in a country
   A. America's central bank is the **Federal Reserve**, nicknamed the "**FED**"

The Federal Open Market Committee (FOMC)

1. the FED makes decisions about the money supply through a committee called the **Federal Open Market Committee (FOMC)**
   A. the FOMC meets to decide how to implement monetary policy, such as deciding whether to raise, lower, or keep the nominal interest rate steady

FED Regulation of Monetary Policy

1. the FED regulates the money supply by changing any one of the following
   A. **open market operations** by buying or selling government bonds (short term loans) from/to banks
   B. lending money to banks at a higher or lower discount rate
   C. setting the required reserve or reserve ratio higher or lower for banks

FED Regulation of Monetary Policy (cont.)

1. the FED's main monetary tool is used when either the FED buys government bonds/securities from banks or sells government bonds/securities to banks
   A. this is referred to as **open market operations**
2. when the U.S. economy is in a recession/in contraction, the goal of the FED is to increase the money supply; more money= more chance to spend money
3. to do this, the FED buys government bonds/securities from banks (buy= bigger)
   A. the FED then pays the bank by increasing the bank's reserves at the FED
   B. banks then have more money to loan to borrowers which influences the FED to decrease the **federal funds rate** (the short-term interest rate that banks charge one another on overnight loans)
   C. this ultimately decreases the **nominal interest rate** (the interest rate when inflation isn't taken into account)
   D. interest-sensitive spending increases and so does aggregate demand/real GDP (AD/Y)

FED Regulation of Monetary Policy (cont.)

1. when the U.S. economy is in expansion/with inflation, the goal of the FED is to decrease the money supply; less money= less chance to spend money
2. to do this, the FED sells government bonds/securities from banks (sells= smaller)
   A. the FED then receives payment from the banks by decreasing the bank's reserves at the FED
   B. banks then have less money to loan to borrowers which influences the FED to increase the **federal funds rate** (the short-term interest rate that banks charge one another on overnight loans)
   C. this ultimately increases the **nominal interest rate** (the interest rate when inflation isn't taken into account)
   D. interest-sensitive spending decreases and so does aggregate demand/real GDP (AD/Y)

FED Regulation of Monetary Policy (cont.)

1. the FED's second tool is uses to impact monetary policy is the **discount rate**
   A. this is the interest rate that the FED charges commercial banks when loaning them money
2. remember, think of all rates like a wall in your way; ↑ is bad and ↓ is good
3. to increase the money supply and expand the economy, the FED decreases the discount rate, making it cheaper for banks to borrow money from them
4. to decrease the money supply and slow down the economy, the FED increases the discount rate to make it more expensive for banks to borrow from them
5. more money= more chance to spend money and less money= less chance to spend money

FED Regulation of Monetary Policy (cont.)

1. the last instrument the FED uses to impact the money supply is the **required reserve** or **reserve ratio**
   A. this is the percent of customer deposits that banks must hold in reserve at the FED and cannot loan out
2. the FED sets the amount, the ratio, that banks must hold
3. only a small percent of the money you have in a bank is held in reserve the rest of your money can be loaned out
   A. this is called **fractional reserve banking**

FED Regulation of Monetary Policy (cont.)

1. when the FED wants to increase the money supply, the FED decreases the reserve requirement
   A. banks then loan out the excess reserves to make money
      i. this is also what happens when deposits are made at a bank
      ii. **excess reserves** are simply extra bank reserves at the FED
2. when the FED wants to decrease the money supply, the FED increases the reserve requirement
   A. banks then have less money to loan out to borrowers
      i. this is also what happens when withdrawals are made at a bank

Monetary Policy: Demand-Side Policy

Actions by the FED that reduce unemployment and increase GDP/AD (reverse a recession)

- Buying bonds/securities from banks
- Decreasing the discount rate
- Decreasing the required reserve rate/reserve ratio
- Combinations of the three

Actions by the FED that reduce inflation and decrease GDP/AD (reverse expansion)

- Selling bonds/securities to banks
- Increasing the discount rate
- Increasing the required reserve rate/reserve ratio
- Combinations of the three

Unemployment, Inflation, Interest Rates, and real GDP/AD

How unemployment, inflation, and interest rates impact an economy's real GDP (*Y*)/aggregate demand (*AD*)

***an ↑ in aggregate demand (*AD*)/real GDP (*Y*) ➡ the price level (*PL*)/inflation ↑ ➡ aggregate supply (*AS*) ↑ ➡ unemployment ↓ ➡ the federal funds rate ↑ ➡ the nominal then real interest rate to ↑ ➡ interest-sensitive spending/investment by *C*, *I*, and *X* to ↓ ➡ a ↓ in aggregate demand (*AD*)/real GDP (*Y*)**

***a ↓ in aggregate demand (*AD*)/real GDP (*Y*) ➡ the price level (*PL*)/inflation ↓ ➡ aggregate supply (*AS*) ↓ ➡ unemployment ↑ ➡ the federal funds rate ↓ ➡ the nominal then real interest rate to ↓ ➡ interest-sensitive spending/investment by *C*, *I*, and *X* to ↑ ➡ an ↑ in aggregate demand (*AD*)/real GDP (*Y*)**

The Money Multiplier

1. as more money flows into an economy and deposits are made at banks, those banks are now able to make additional loans
   A. interest rates decrease due to the increase in the money supply and aggregate demand/real GDP (AD/Y) increases
      i. this positive ripple effect on the economy is called the **money multiplier** (the expansion or contraction of a country's money supply that results from banks being able to lend more or having to keep more money in their banks

what is the formula for the money multiplier?

The Money Multiplier (cont.)

1. example: if the reserve ratio is 10% (.1) and the money multiplier is 10, a $1 million purchase of bonds/securities by the FED from banks would lead to a $10 million increase in demand deposits and the overall money supply, available funds that would be available for banks to loan to customers

macro formula #10

FED= full amount multiplied
person= partial amount multiplied

Situation: The Fed *buys* $1 million worth of bonds/securities from banks and the reserve requirement/reserve ratio is 10%

"mr"

$$10 \text{ money multiplier} = \frac{1}{\text{reserve ratio}}$$

10%
or .1

10 x $1 million= $10 million *increase* in loans and the money supply

The Money Multiplier (cont.)

1. as more money flows out of an economy and withdrawals are made at banks, those banks are now able to make fewer loans
   A. interest rates increase due to the decrease in the money supply and aggregate demand/real GDP (AD/Y) decreases
      i. this leads to a negative ripple effect on the economy
2. example: if the reserve ratio is 10% (.1) and the money multiplier is 10, a $1 million sale of bonds/securities by the FED to banks would lead to a $10 million decrease in demand deposits and the overall money supply, less funds would be available for banks to loan to customers

Situation: The Fed *sells* $1 million worth of bonds/securities to banks and the reserve requirement/reserve ratio is 10%

person= partial amount multiplied

FED= full amount multiplied

"mr"

$$10 \text{ money multiplier} = \frac{1}{\text{reserve ratio}}$$

10% or .1

10 x $1 million= $10 million *decrease* in loans and the money supply

The Money Multiplier (cont.)

1. when using the money multiplier, two determinations have to be made
   A. is the impact on the economy a positive or negative one
   B. is the money being referred to that will impact the economy already in the money supply or not?
2. example: if a person deposited $100 in cash in their bank, the money they are depositing is already in the money supply and won't be counted twice
   A. if the required reserve is 20%, the money multiplier would be 5
      i. the 5 would be multiplied by only $80 since $20 of the $100 (money already in the money supply) has to remain in reserve; only $80 can be loaned out
   B. if $100 was withdrawn, there would be a decrease in loans/money supply

"mr" 5 money multiplier = 1 / reserve ratio .2

FED= full amount multiplied

person= partial amount multiplied

5 x $80= $400 *increase* in loans and the money supply

"mr" 5 money multiplier = 1 / reserve ratio .2

5 x $80= $400 *decrease* in loans and the money supply

The Money Multiplier (cont.)

FED= full amount multiplied

$$\text{"mr"}\quad \text{money multiplier} = \frac{1}{\text{reserve ratio}}$$

person= partial amount multiplied

1. If the reserve requirement is 5% and the FED sells $10 million in bonds: 1) what is the money multiplier, 2) what will happen to the money supply, and 3) by how much?

   1. multiplier= 20, 2. money supply decreases, 3. -$200 million

2. If the reserve requirement is 10% and the FED buys $10 million in bonds: 1) what is the money multiplier, 2) what will happen to the money supply, and 3) by how much?

   1. multiplier= 10, 2. money supply increases, 3. $100 million

3. If a person deposits $100 in their bank and the reserve requirement is 10%, 1) what is the money multiplier, 2) what will happen to the money supply, and 3) by how much?

   1. multiplier= 10, 2. money supply increases, 3. $900