Part- 3 Chapter- 15

Aplia Homework: The Debate over Monetary and Fiscal Policy

**1. Velocity and the quantity equation**

Consider a simple economy that produces only cell phones. The following table contains information on the economy's money supply, velocity of money, price level, and output. For example, in 2011, the money supply was $320, the price of a cell phone was $8.00, and the economy produced 600 cell phones.

Fill in the missing values in the following table, rounding to the nearest cent when necessary.

| **Year** | **Quantity of Money** | **Velocity of Money** | **Price Level** | **Quantity of Output** | **Nominal GDP** |
| --- | --- | --- | --- | --- | --- |
| ***(Dollars)*** | ***(Dollars)*** | ***(Cell phones)*** | ***(Dollars)*** |
| 2011 | 320 | \_\_\_­ | 8.00 | 600 | \_\_\_\_\_\_ |
| 2012 | 336 | 15 | **\_\_\_\_** | 600 | \_\_\_\_\_\_ |

The money supply grew at a rate of \_\_\_\_\_ from 2011 to 2012. Since cell phone output did not change from 2011 to 2012 and the velocity of money \_\_\_\_\_\_\_, the change in the money supply was reflected \_\_\_\_\_\_ in changes in the price level. The inflation rate from 2011 to 2012 was \_\_\_\_\_\_.

**2. Determinants of the velocity of money**

The velocity of money tends to decrease when people have \_\_\_\_\_\_\_\_ money balances. Which of the following would cause a decrease in the velocity of money? Check all that apply.

A decrease in the interest rate

A decrease in the availability of automatic teller machines (ATMs)

A decrease in the availability and acceptance of credit cards

A decrease in the rate of inflation

**3. The monetary policy rule and the velocity of money**

The equation of exchange, also known as the quantity equation, states that the product of the money supply (M) and the velocity of money (V) is equal to the product of the price level (P) and real GDP (Y): M×V=P×Y. The equation implies that a given percentage change on the left-hand side, M×V, is matched by an equal percentage change on the right-hand side, P×Y:

Percentage Change in (M×V) = Percentage Change in (P×Y)

Because the percentage change in the product of two variables approximately equals the sum of the percentage changes of the variables, the equation can be rewritten in growth rate form as:

%ΔM+%ΔV = %ΔP+%ΔY

For example, if you know that the money supply grows at a rate of 8% per year, velocity grows at a rate of 1% per year, and real GDP grows at a rate of 5% per year, you can use this rule to determine that the percentage change in the price level is equal to 4% (%ΔM+%ΔV−%ΔY=%ΔP).

Suppose the central bank believes that the velocity of money grows at a predictable rate of 2% per year and that potential real GDP grows at 2% per year. If the central bank observes a a monetary policy rule that stipulates money supply growth of 4% per year, it will expect an inflation rate of \_\_\_ per year and nominal GDP growth of **\_\_\_\_** per year.

Suppose that actual growth in the velocity of money unexpectedly rises to 2.5%. If the central bank continues to adhere to money supply growth of 4% per year and real GDP remained unchanged, the inflation rate will be \_\_\_\_\_\_\_ than anticipated, and nominal GDP growth will be \_\_\_\_\_\_\_ than anticipated.

**4. Policy toward asset price bubbles**

True or False: The lower the amount of leverage used to purchase assets, the less damage an asset price bubble can cause.

True

False

Among the challenges that the Federal Reserve faces in dealing with asset price bubbles is that its policy instruments can hit only \_\_\_\_\_\_\_\_ targets.

As a result, the emerging consensus among economists on asset price bubbles is that it is better to try to \_\_\_\_\_\_\_\_\_\_\_\_.

**5. Lags in fiscal policy versus monetary policy**

True or False: In general, fiscal policy requires less time to plan and carry out than monetary policy does.

True

False

Aside from government spending, fiscal policy works mainly through \_\_\_\_\_\_\_\_\_ spending. As a result, fiscal policy, once decided upon, has a \_\_\_\_\_\_\_\_ effect on output than monetary policy does.

**6. Stabilization policy and the aggregate supply curve**

Consider two hypothetical economies, Economy A and Economy B. suppose that in each, the government implements a contractionary policy. The economies are identical except that the aggregate supply (AS) curve in Economy A is steeper than the AS curve in Economy B.

The following two graphs show the aggregate demand (AD) and aggregate supply (AS) curves for the two economies.

On both graphs, show the effects of the government policy by shifting either the aggregate demand curve, the aggregate supply curve, or both.

Note: Select and drag one or both of the curves to the desired position. Curves will snap into position, so if you try to move a curve and it snaps back to its original position, just drag it a little farther.

In Economy A, the contractionary policy has a \_\_\_\_\_\_\_\_\_ impact on real GDP and a \_\_\_\_\_\_\_\_ effect on inflation than in Economy B.

**7. Use of discretionary policy to stabilize the economy**

The following graph shows a hypothetical aggregate demand curve (AD), short-run aggregate supply curve (AS), and long-run aggregate supply curve for the economy in February 2025.

According to the graph, this economy is in \_\_\_\_\_\_\_\_\_\_. To bring the economy back to its potential GDP, the government could use \_\_\_\_\_\_\_\_\_\_ fiscal policy such as \_\_\_\_\_\_\_\_\_\_.

Shift the appropriate curve on the following graph to illustrate the effects of the policy you previously chose.

Note: Select and drag one or both of the curves to the desired position. Curves will snap into position, so if you try to move a curve and it snaps back to its original position, just drag it a little farther.

Suppose that in February 2025, policymakers undertake the type of policy that is necessary to bring the economy back to its potential GDP, given the scenario just described. In April 2025, imports increase because the United States has eliminated trade restrictions on Japanese goods.

Because of the \_\_\_\_\_\_\_\_\_\_ associated with implementing monetary and fiscal policy, the impact of the policymakers' stabilization policy will likely \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ once the effects of the policy are fully realized.