|  |
| --- |
| **Exercises from old exams to chapters in B & W with solutions.** |

|  |
| --- |
| **Chapter 9 and 10** |

**Exercise 1**

1. Define the money demand curve in a money market model. Who do we assume are the participants behind the curve?
2. Use a money market model to explain how the central bank and the banking system can influence the supply of money.
3. Explain the inflation target instrument by using a money market model and give reasons why many countries have changed from monetary targeting to inflation targeting.
4. Explain the Taylor rule and use it to predict outcome if the economy is at its natural rate. Use also a money market model to explain this situation.

**Answer:**

1. The public’s demand for money is negatively related to the interest rate, which represents the cost of borrowing from commercial banks. The public could be both households and firms.
2. The supply of money depends on both the size of the monetary base (the sum of currency in the hands of the public and bank reserves) from the central bank and how well the money multiplier works (the chain of money and credit creation of banks). In the money market model the supply side is explained both by using a vertical supply curve (assuming the amount of supply is given) and a horizontal supply curve (the interest rate is given).
3. From monetary targeting (vertical supply curve) to inflationary targeting (horizontal supply curve). The reasoning behind inflation targeting consists of two observations: 1. It is easier to target interest rates than reserves. 2. If the money supply is difficult to control, it is better to use the interest rate directly as an instrument for controlling inflation.
4. The Taylor rule states that the central bank will raise the interbank market rate when the inflation rate exceeds its target inflation rate and when real GDP exceeds its current equilibrium or trend level. If the economy is at its natural rate, there is no inflation gap and no output gap. Then the central bank will set its interbank market interest rate equal to the neutral interest rate. This is the interest rate that the central bank would want to set if both the inflation and GDP were stabilized at their desired levels. In a money market model with horizontal supply curve it can be thought of as where the supply schedule is placed.

**Exercise 2**

1. Define the monetary base and the money multiplier.
2. Use the concepts from a) to explain, how banks can “create money”.
3. How can a central bank increase currency in circulation?
4. After the financial crises of 2008, many countries experienced that: “Although the central bank ran an extreme expansionary monetary policy, the money supply went down.” Give examples of reason why this situation can occur.

**Answer:**

1. Monetary base is the sum of currency in the hands of the public and bank reserves. The money multiplier links the monetary base and wider monetary aggregates.
2. Banks create money when they from deposits grant loans. An initial deposit triggers a succession of loans paid in the form of deposits. The chain of loans and deposits eventually dies out because both banks and the public keep a percentage share as reserves.
3. The balance sheet of a Central Bank: Increase currency in circulation by buying foreign assets (not a tool if flexible exchange rates), increase loans to banks by reducing the policy rate or buying securities (also called open market operations or quantitative easing).
4. If a central bank use tools as explained in c) the monetary base increase, but the money supply also depends on how the money multiplier works and further, the money multiplier depends on how much reserves banks and the public holds. Banks can hold reserves in their own vault or in the central bank. During a crisis, both banks and the public will hold more reserves. This effect will work against the increase in the monetary base and if the latter is the strongest, the total effect can be less money in circulation. B & W define different aggregates of money in the introduction to chapter 9 (M1, M2 and M3), but then don’t distinguish between them – use only M for money supply = currency in circulation + Bank deposits.