Short questions **(250 words each)**

1. A firm can potentially meets its financing needs through either taking a *loan* from the bank, issuing *equity* or issuing *bonds*. Discuss the factors that influence the route it chooses to finance its needs.

2. How does contractionary monetary policy affect equity prices according to the Gordon growth model?

3. Describe four ways in which monetary policy could affect aggregate demand through consumption.

Problem

1. Consider the *Bernanke-Blinder (AER, 1988)* extension to the standard IS-LM model. Banks are assumed to hold bonds B, loans L and reserves R as assets, and have deposits D as liabilities, so that the representative banks balance sheet is as follows:

   $$B + L + R = D$$

   Reserves are equal to the legal minimum reserve requirement $R = \tau D$ where $0 < \tau < 1$. This yields the supply of deposits in the money market:

   $$D^s = \frac{1}{\tau} R$$

   The demand for deposits is given by the following traditional money demand equation:

   $$D^d = Y - k_M \, i_b + d_m$$

   where Y is real aggregate output, i_B is the interest rate on bonds, and d_M is a money demand shock. The demand for loans is described by

   $$L^d = \mu Y - k_L(i_L - i_B) + d_L$$

   where i_L is the loan interest rate, and d_L a loan demand shock. The supply of loans is given by

   $$L^s = \lambda(D - R) + s_L$$

where s_L is a loan supply shock and $0 < \lambda < 1$. Goods market equilibrium is described by the traditional IS equation

$$Y = -\gamma_L\, i_L - \gamma_B\, i_B + d_Y$$

where d_Y is an aggregate demand shock. The parameters k_M, k_L, μ, γ_L and γ_B are all positive.

(a) Derive the relationship between output Y and the bond interest rate i_B such that there is equilibrium in the money market, and denote it by LM. Explain how monetary policy affects the LM curve.

(b) Derive the equilibrium loan interest rate i_L as a function of i_B, Y and R. Give an intuitive explanation for the effect on i_L of a change in i_B, Y , R, d_L and s_L.

(c) Derive the relationship between output Y and the bond interest rate i_B such that there is equilibrium in both the goods market and the loan market, and denote it by CC. Explain how monetary policy affects the CC curve.

(d) Suppose that the central bank engages in open market operations and increases the level of bank reserves R. Show graphically how this affects output Y. Give an intuitive explanation, distinguishing between the interest rate channel and the bank lending channel.

(e) For what parameter value(s) would the lending channel be inoperative? Give a brief economic interpretation.

Essay **(500 words)**

1. "*The credit channel is an enhancement mechanism for traditional monetary policy transmission, not a truly independent or parallel channel.*" Discuss.

Main readings

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