1 The Money Market

- All factors in the real intertemporal model still present. (Labor Market, Goods Market, Capital Market)

- In addition, there is also another market, the Money Market.

1.1 Money Market Equilibrium

- Nominal money demand: $M^d = PL(Y, Y', R)$. Money demand $L$ is increasing in $Y$, decreasing in $R \approx r + \pi$.

- Nominal money supply is fixed: $M^s = M$.

- The price level adjusts to clear the money market: $M = PL(Y, Y', R)$.

- Note that the model is “recursive”: solve for the price level last. The other variables determined by the real markets (goods, labor, capital).
1.2 Equilibrium Effects of $M^s \uparrow$ and Monetary Neutrality

- The price level increases proportionately.

$$M = PL(Y, Y', R)$$

The real money supply $M/P$ is left unchanged.

- **Money is neutral**: no effects on real side, only prices.

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**Figure 10.5** The Current Money Market in the Monetary Intertemporal Model

**Figure 10.8** The Effects of a Level Increase in $M$—The Neutrality of Money
1.3 Short-Run Analysis in the Monetary Intertemporal Model

A temporary Decrease in Total Factor Productivity

Question:

Suppose we have a temporary decrease in Total Factor Productivity, what will be the equilibrium effects on output, interest rates, employment, wages, and the price level?

1.4 Shifts in Money Demand

Question:

Suppose we have a shock that shift the money demand curve to the right, what will be the equilibrium effects on the price level?
1.5 Monetary Policy: Targets and Policy Rules

- Money Supply Targeting
- Nominal Interest Rate Targeting

Exercise 1:

Suppose that the government fixes the realized, ex-post nominal interest rate rather than the money supply. That is, the government wants to hold constant the realized rate of $R = r + \pi$, making the money supply $M$ (and so the price level $P$ and inflation rate $\pi$) endogenous. Answer the following questions using the monetary intertemporal model with flexible prices.

1. Suppose that there is an exogenous fall in the demand for money, say due to financial innovation. This change is observable, and the government targets the nominal interest rate as described above. What are the effects of the change on output, interest rates, the price level, and money supply? How does this contrast with the case where money supply is constant?

2. Suppose that there is a temporary increase in TFP. This change is observable, and the government targets the nominal interest rate as described above. What are the effects of the change on output, interest rates, the price level, and money supply? How does this contrast with the case where money supply is constant?