

Dornbusch Overshooting Model

Overshooting model widely known as “Dornbusch Overshooting Model” was introduced to the world by a renowned German economist, Rüdiger Dornbusch. The model's main thesis is that prices of goods in an economy do not immediately react to a change in foreign exchange rates but it first impacts other factors—such as financial markets, money markets, derivatives markets, and bond markets—which then transfers its influence onto the prices of goods.

The overshooting model argues that the foreign exchange rate will temporarily overreact to changes in monetary policy to compensate for sticky prices of goods in the economy. In the short run, the equilibrium level will be reached through shifts in financial market prices, rather than through shifts in the prices of goods themselves. So, initially, foreign exchange markets overreact to changes in monetary policy, which creates equilibrium in the short run. As the prices of goods gradually respond to these financial market prices, the foreign exchange markets temper their reaction and create long-term equilibrium. Thus, there will be more volatility in the exchange rate due to overshooting and subsequent corrections than would otherwise be expected.

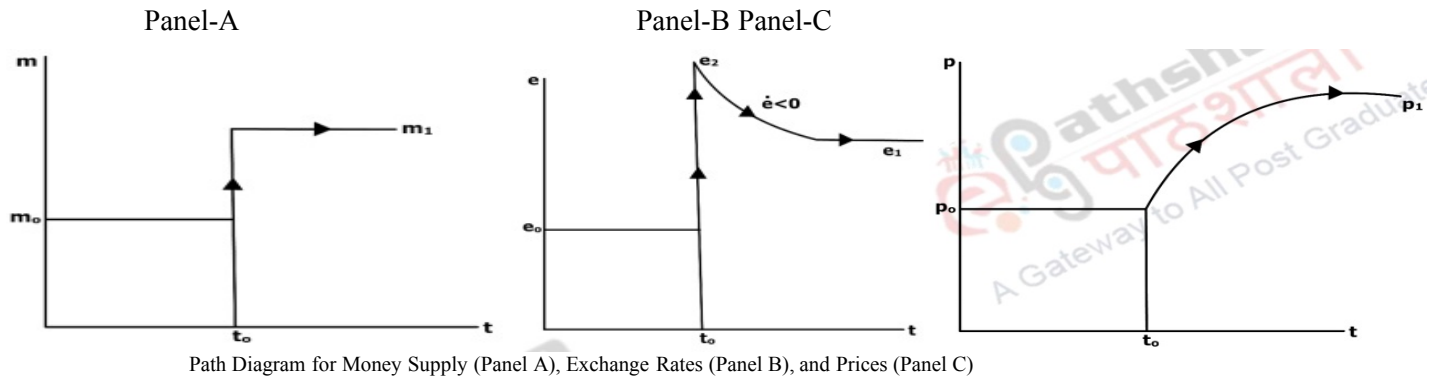
The model is based on the following assumptions:

(i) Small open economy: The country's foreign capital market is small in comparison to the world capital market, and hence, it faces a given interest rate, which is equalized to the world interest rate.

(ii) Perfect capital mobility: There is perfect mobility of capital in and out of the economy which ensures that the yield on the domestic securities is equalized to the yield on the foreign securities.

(iii) Prices of imports are given: Since the economy is a small open economy, in the domestic market, the world prices of imports are given.

The following diagrams show time path of different variables under this model:



As shown in panel-A, at time t_0 , money supply increases from m_0 to m_1 . In the long-run, there is an equal increase in the exchange rates and the price level. However, in the short-run, at time t_0 , exchange rates jump to e_2 as the one shown in Panel-B. Since prices are slow to adjust, they increase at a slower pace to their long-run value of p_1 as shown in Panel-C. As a result, exchange rates get back to their long-run level of e_1 when prices also get fully adjusted as the one shown in Panel-B.

To conclude, Dornbusch was arguing basically that in the short run, equilibrium is reached in the financial markets, and in the long run, the price of goods responds to these changes in the financial markets.