Notes on Demand and Supply in the Foreign Exchange Market

These notes supplement the discussion on pp. 477 – 481 in your textbook (7/e). You should read those pages first before reading the notes here.

Here are several key points to remember:

a. A demand for foreign currency is at the same time a supply of domestic currency in the foreign exchange market. Similarly, a supply of foreign currency (by foreign country) is at the same time a demand for our currency.

b. Demand for foreign currency is a derived demand, i.e., it is derived from our desire to purchase foreign goods, service, and assets.

c. For Figure 1, on p. 471, note that \( e \) on the vertical axis is the exchange rate and is defined as domestic currency per one unit of foreign currency (\$/Sfr) for example. The horizontal axis is quantity of foreign exchange, Swiss francs in this case.

d. Referring to Figure 2, p. 480, the curve \( D_{G&S} \) represents domestic (U.S.) demand for foreign currency (Sfr, for example) arising from U.S. demand for foreign goods and services because we need foreign currency in order to purchase foreign goods and services. Ignoring payment of investment income to foreign countries and unilateral transfers, \( D_{G&S} \) represents demand for foreign currency that would result in debits to the U.S. current account. Adding in U.S. demand for foreign asset, we get \( D_{Total} \).

e. \( D_{G&S} \) is downward sloping because, holding prices of domestic and foreign (in foreign currency unit) goods and services constant, an appreciation of the domestic currency makes foreign goods and services more attractive relative to U.S. goods and services. This is because you now can purchase one unit of foreign currency with fewer U.S. dollars, thus you can purchase the same quantity of foreign goods and services with fewer dollars. This is known as a decrease in the U.S. price of foreign goods and services. Thus the quantity demanded of foreign goods and services by the U.S. would increase, increasing the quantity demanded by the U.S. of foreign currency.

f. Similarly, \( S_{G&S} \) represents supply of foreign currency (euro, for example) arising from foreign demand for U.S. goods and services. Again, ignoring receipt of investment income from foreign countries and unilateral transfers, \( S_{G&S} \) represents supply of foreign currency that would result in credits to the U.S. current account. Now, adding in foreign demand for U.S. asset, we get \( S_{Total} \).

g. \( S_{G&S} \) is upward sloping for the same reason that \( D_{G&S} \) is downward sloping. Holding prices of domestic and foreign (in foreign currency unit) goods and services constant, an appreciation of the U.S. dollars makes U.S. goods and services relatively more expensive than foreign goods and services. Foreign individuals now have to pay more to purchase the same quantity of U.S. goods and services. Thus the quantity demanded for U.S. goods and services by foreign individuals would decrease, decreasing the quantity of supply of foreign currency in the foreign exchange market.

h. The equilibrium exchange rate (\( e_{eq} \)) in Figure 2 is determined by the intersection of \( S_{Total} \) and \( D_{Total} \). At the equilibrium exchange rate, there is a domestic current account deficit measured by \((Q_2 - Q_1)\), which, because of double-entry bookkeeping, also measures the domestic capital and financial account surplus. To see this, note that \((0 - Q_1)\) measures credits to the domestic current account, while \((0 - Q_2)\) measures debits to the domestic current account (again, ignoring net investment income and net unilateral transfers). Debits to the domestic current account exceed credits by \((Q_2 - Q_1)\). Now \((Q_1 - \ldots\)
$Q_{eq}$ measures credits to the domestic capital and financial account, while $(Q_2 - Q_{eq})$ measures debits to the domestic capital and financial. Credits to the domestic capital and financial account exceed debits by $(Q_2 - Q_{eq})$. 