

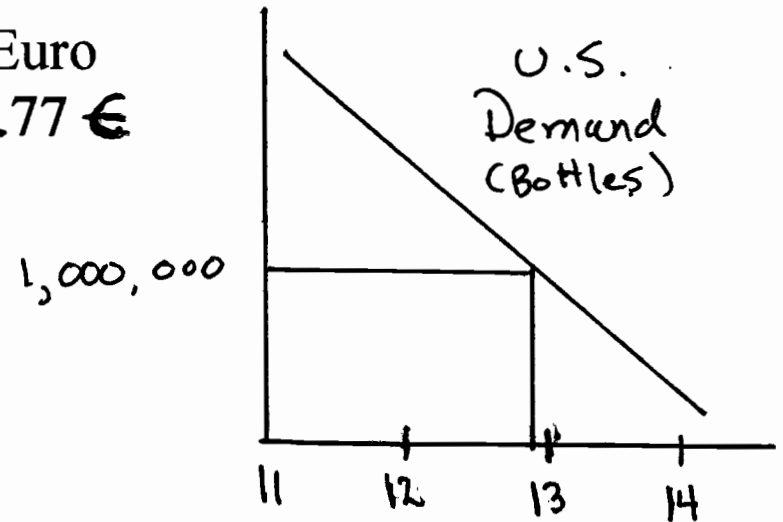
FRENCH WINE
PRODUCERS

EXCHANGE MARKET
(Currency Traders)

U.S. WINE MARKET

Price: 10Euros/bottle
Cost: 6Euros/bottle
Profit: 4Euros/bottle

Price: \$1.29 per Euro
 $\$ 1.00 = .77 \text{ €}$



At the price of \$12.90 per bottle, the U.S. demands 1,000,000 bottles of French wine. U.S. importers pay the currency traders $1,000,000 \times \$12.90 = \$12,900,000$. The currency traders then pay French wine exporters $.77 \times \$12,900,000 = 10,000,000$ Euros (transaction cost assumed to be zero). French wine exporters therefore profit in the amount of 4 Euros/bottle $\times 1,000,000$ bottles = 4,000,000 Euros.

In order to stem the flow out of Euros and slow the flow in of dollars, currency traders increase price of the Euro for Americans; the US dollar depreciates.

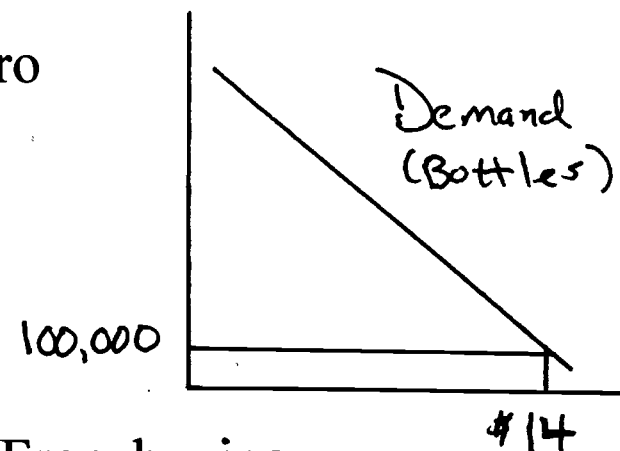
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Price: 10Euros/bottle
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New price: \$1.40 per Euro
 $\$1 = 71\text{-}\text{€}$



At the new price of \$14.00/bottle, U.S. demand for French wine falls to 100,000 bottles. U.S. importers give currency dealers $100,000 \times \$14 = \$1,400,000$ who pay out to French exporters 1,000,000 Euros. French profits from U.S. wine sales fall from 4,000,000 Euros to 400,000 Euros.

Impact of currency fluctuations on international business transactions (no hedging):

1. Medtronic sells a batch of medical devices to a French firm in the amount of \$12,900,000. The sale is made on July 1 with delivery and payment due December 31.

On July 1 the exchange rate is $\$1.29 = 1$ Euro. So the French firm promises to pay Medtronic $\$12,900,000 / \$1.29 = 10,000,000$ Euros at the time of delivery.

But on December 31, the exchange rate is $\$1.40 = 1$ Euro. So when the French Firm pays it 10,000,000 Euros, Medtronic actually receives $\$1.40 \times 10,000,000 = \$14,000,000$; it realizes an extra profit of \$1,100,000 or 8.53%.

2. At the same time, Airbus sells Northwest Airlines a new plane for 200,000,000 Euros. Northwest promises to take delivery and pay for the new plane on December 31.

On July 1 Northwest Airlines agrees to pay 200,000,000 Euros x \$1.29/Euro or \$258,000,000.

On December 31, Northwest Airlines pays Airbus \$258,000,000 and takes delivery. BUT at the new exchange rate of \$1.40=1 Euro Airbus receives only $.71 \times \$258,000,000 = 184,285,744$ Euros—almost \$16,000,000 less than it expected (a 7.85% shortfall).