

Illustrating the J-Curve

J-curve - The pattern of change in the balance of trade after currency devaluation. The balance deteriorates initially as the local currency value of imports rises and export revenue falls. However, this is followed by an improved trend, as demand for imports falls owing to their costliness, while exports become more attractive due to their low price.

CASE I - Upward sloping supply curve of foreign exchange

1\$ = ¥200 Japan exports computers, USA exports wheat

<u>Forex</u>	<u>¥ Price</u>	<u>\$ Price</u>	<u>Demand</u>
Japan Export (X) \$20,000 (Supply)	¥200,000	\$1000	20
Japan Imports (M) \$10,000 (Demand)	¥200,000	\$1000	10

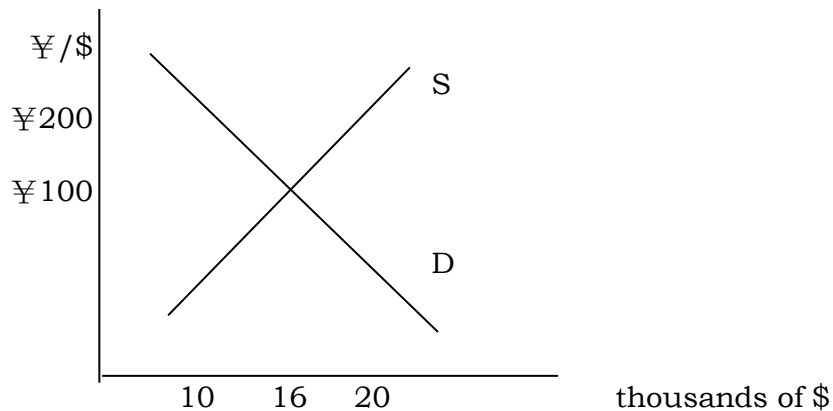
X - M = \$10,000 Japan has trade surplus, USA has trade deficit

1\$ = ¥100

<u>Forex</u>	<u>¥ Price</u>	<u>\$ Price</u>	<u>Demand</u>
Japan Export (X) \$16,000 (Supply)	¥200,000	\$2000	8
Japan Imports (M) \$16,000 (Demand)	¥100,000	\$1000	16

X - M = \$0 Balance of Trade

Draw the Supply and Demand Curves



CASE II - Downward sloping supply curve of foreign exchange (stable)

1\$ = ¥200

Japan exports computers, USA exports wheat

<u>Forex</u>	<u>¥ Price</u>	<u>\$ Price</u>	<u>Demand</u>
Japan Export (X) \$20,000 (Supply)	¥200,000	\$1000	20
Japan Imports (M) \$10,000 (Demand)	¥200,000	\$1000	10

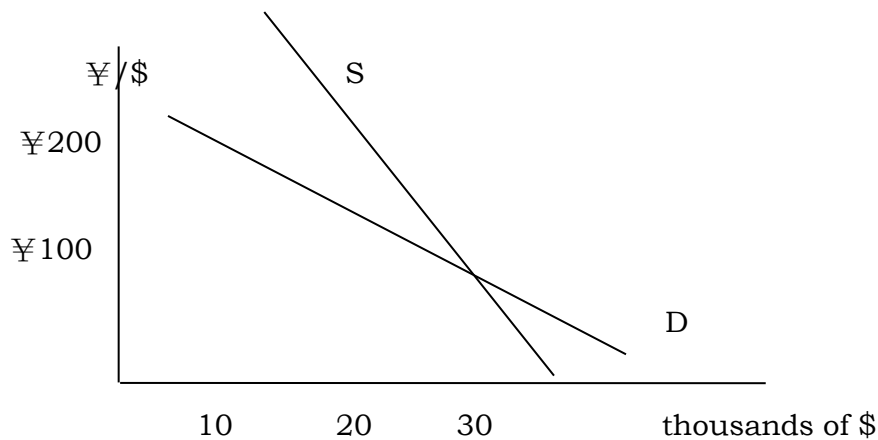
X - M = \$10,000 Japan has trade surplus, USA has trade deficit

1\$ = ¥100

<u>Forex</u>	<u>¥ Price</u>	<u>\$ Price</u>	<u>Demand</u>
Japan Export (X) \$30,000 (Supply)	¥200,000	\$2000	15
Japan Imports (M) \$30,000 (Demand)	¥100,000	\$1000	30

X - M = \$0 Balance of Trade

Draw the Supply and Demand Curves



CASE III - Downward sloping supply curve of foreign exchange (unstable)

1\$ = ¥200

Japan exports computers, USA exports wheat

<u>Forex</u>	<u>¥ Price</u>	<u>\$ Price</u>	<u>Demand</u>
Japan Export (X) \$20,000 (Supply)	¥200,000	\$1000	20
Japan Imports (M) \$10,000 (Demand)	¥200,000	\$1000	10

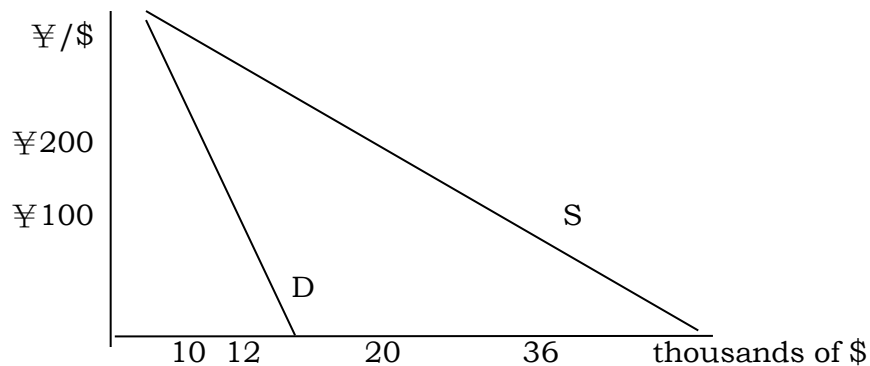
X - M = \$10,000 Japan has trade surplus, USA has trade deficit

1\$ = ¥100

<u>Forex</u>	<u>¥ Price</u>	<u>\$ Price</u>	<u>Demand</u>
Japan Export (X) \$36,000 (Supply)	¥200,000	\$2000	18
Japan Imports (M) \$12,000 (Demand)	¥100,000	\$1000	12

X - M = \$24,000 Japan has trade surplus, USA has trade deficit

Draw the Supply and Demand Curves



In case III, depreciation of the dollar is not effective in correcting a nation's trade balance. This is called elasticity pessimism. The Marshall-Lerner condition states that the sum of the elasticities of imports and exports with respect to the exchange rate must be greater than one for depreciation to cure a deficit.

$$E_x + E_m > 1$$