
The Foreign Exchange Market

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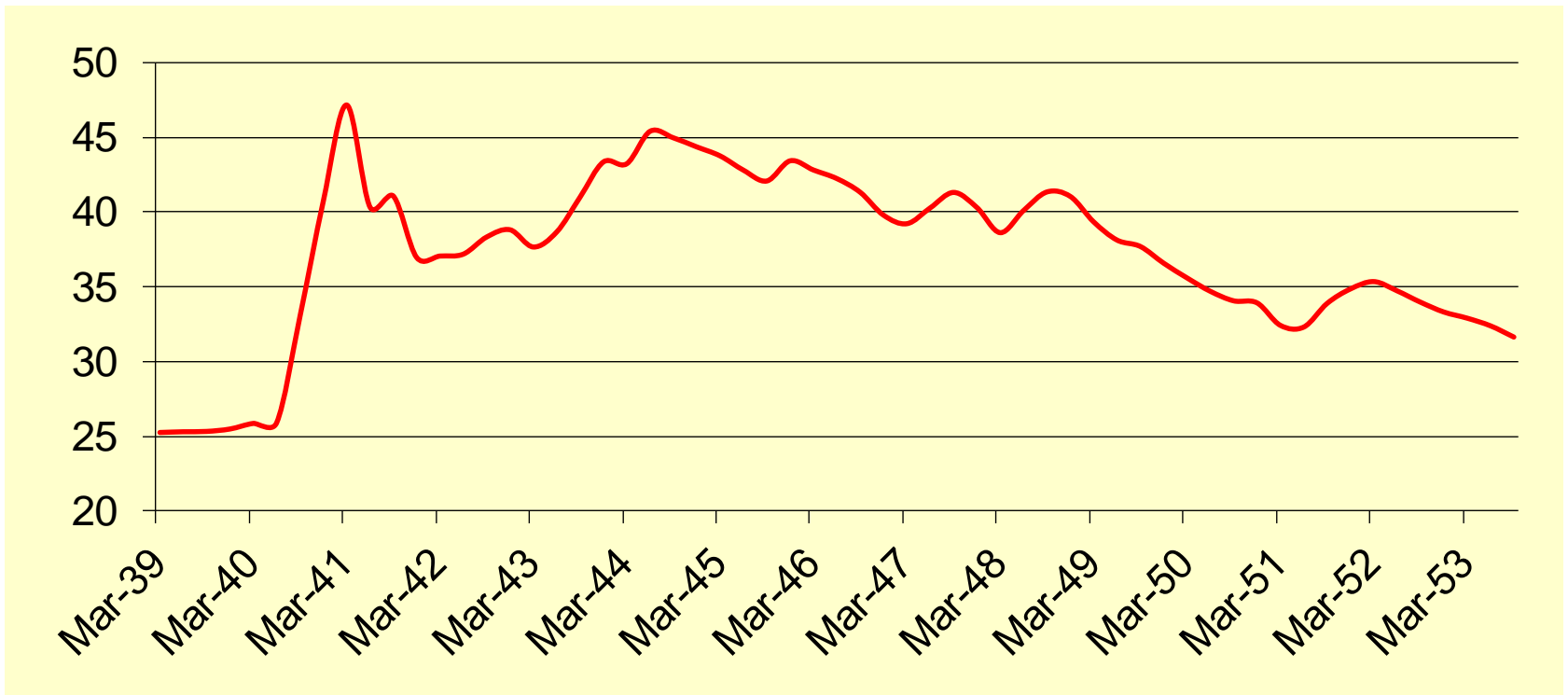
Foreign Exchange (1)

- Exchange rate: price of one currency in terms of another
 - Foreign exchange market: the financial market where exchange rates are determined
 - Spot transaction: immediate (two-day) exchange of bank deposits
 - Spot exchange rate
 - Forward transaction: the exchange of bank deposits at some specified future date
 - Forward exchange rate
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Foreign Exchange (2)

- Appreciation: a currency rises in value relative to another currency
 - Depreciation: a currency falls in value relative to another currency
 - When a country's currency appreciates, the country's goods abroad become more expensive and foreign goods in that country become less expensive and vice versa
 - Over-the-counter market mainly banks
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Reference Exchange Rate (Baht/U.S. Dollar)



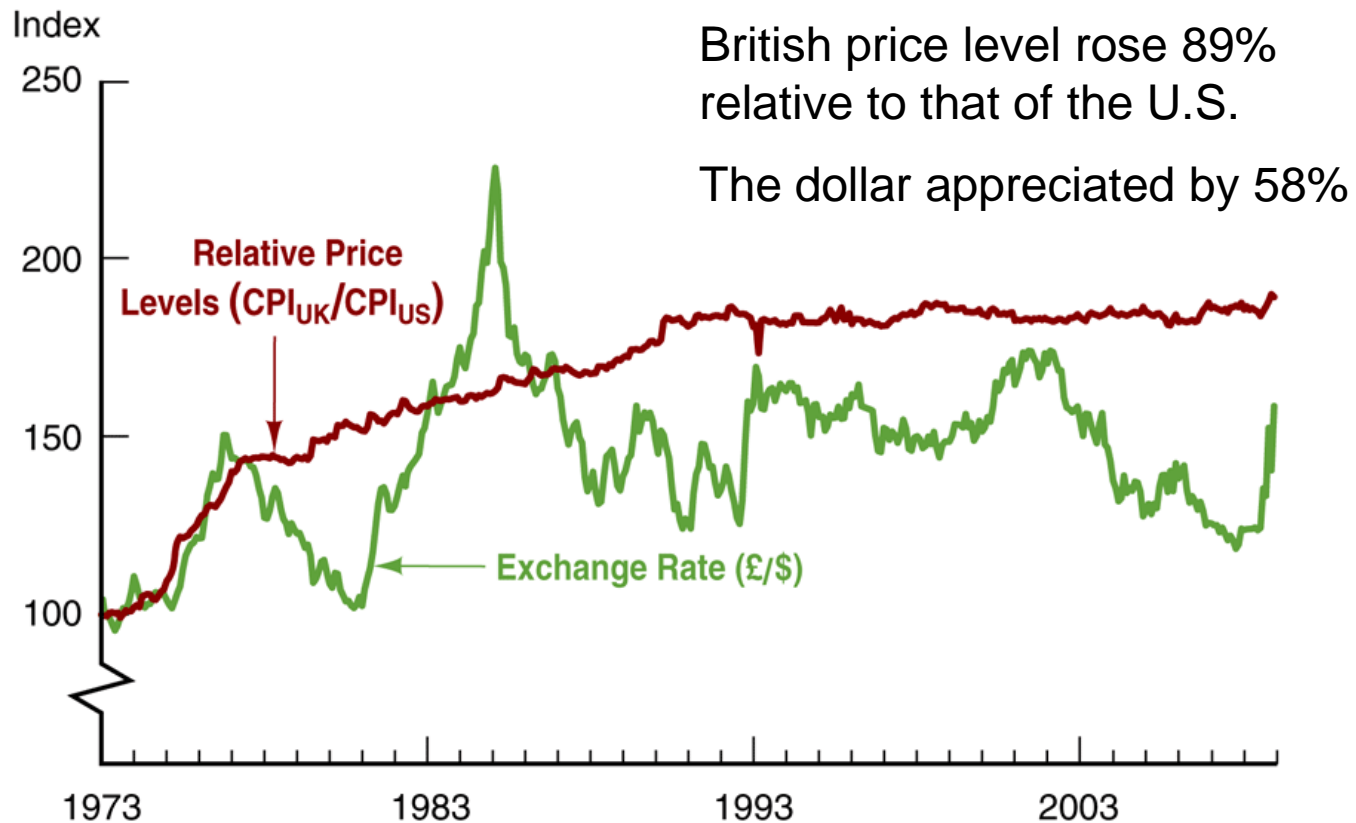
Exchange Rates in the Long Run (1)

- Law of one price:
 - If two countries produce an identical good, and transportation costs are very low, the price of the good should be the same
 - Theory of Purchasing Power Parity (PPP):
 - Exchange rates between any two currencies will adjust to reflect changes in the price levels of the two countries
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Exchange Rates in the Long Run (2)

- Real Exchange Rate:
 - The rate at which domestic goods can be exchanged for foreign goods
 - i.e. the price of domestic goods relative to the price of foreign goods denominated in the domestic currency (P/eP^*)
 - When the real exchange rate is below 1, ...
 - PPP: the real exchange rate is always equal to 1
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FIGURE 2 Purchasing Power Parity, U.S./U.K., 1973–2008 (Index: March 1973 = 100.)



Source: <ftp.bls.gov/pub/special/requests/cpi/cpi.ai.txt>.

Why PPP cannot fully explain exchange rates?

- Identical goods?
 - Non-traded goods
 - Trade barriers
 - Transportation costs
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Factors That Affect Exchange Rates in the Long Run

- Basic Reasoning:
 - If a factor increases the demand for domestic goods relative to foreign goods, the domestic currency will appreciate
 - Relative Price Levels
 - Trade Barriers
 - Preferences for Domestic vs. Foreign Goods
 - Productivity
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Summary Table 1 Factors That Affect Exchange Rates in the Long Run

| Factor | Change in Factor | Response of the Exchange Rate, E^* |
|-----------------------|------------------|--------------------------------------|
| Domestic price level† | ↑ | ↓ |
| Trade barriers† | ↑ | ↑ |
| Import demand | ↑ | ↓ |
| Export demand | ↑ | ↑ |
| Productivity† | ↑ | ↑ |

*Units of foreign currency per dollar: ↑ indicates domestic currency appreciation; ↓, depreciation.

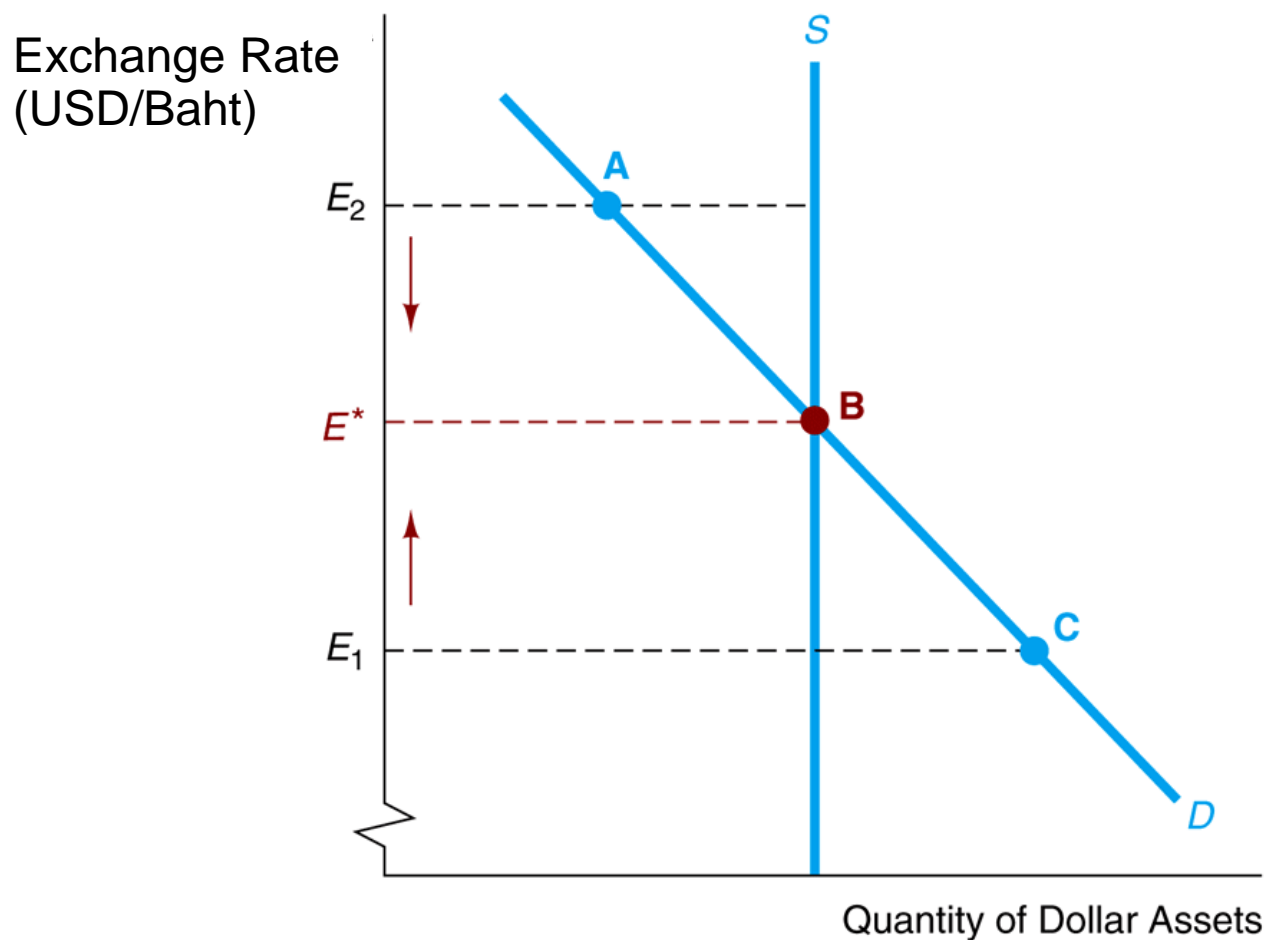
†Relative to other countries.

Note: Only increases (↑) in the factors are shown; the effects of decreases in the variables on the exchange rate are the opposite of those indicated in the “Response” column.

Exchange Rates in the Short Run: A Supply and Demand Analysis

- An exchange rate is the price of domestic assets in terms of foreign assets
 - Supply curve for domestic assets
 - Assume amount of domestic assets is fixed (supply curve is vertical)
 - Demand curve for domestic assets
 - Most important determinant is the relative expected return of domestic assets
 - At lower current values of the dollar (everything else equal), the quantity demanded of dollar assets is higher
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FIGURE 3 Equilibrium in the Foreign Exchange Market



Explaining Changes in Exchange Rates

- Shifts in the demand for domestic assets
 - Domestic interest rate
 - Foreign interest rate
 - Expected future exchange rate
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FIGURE 4 Response to an Increase in the Domestic Interest Rate, i^D

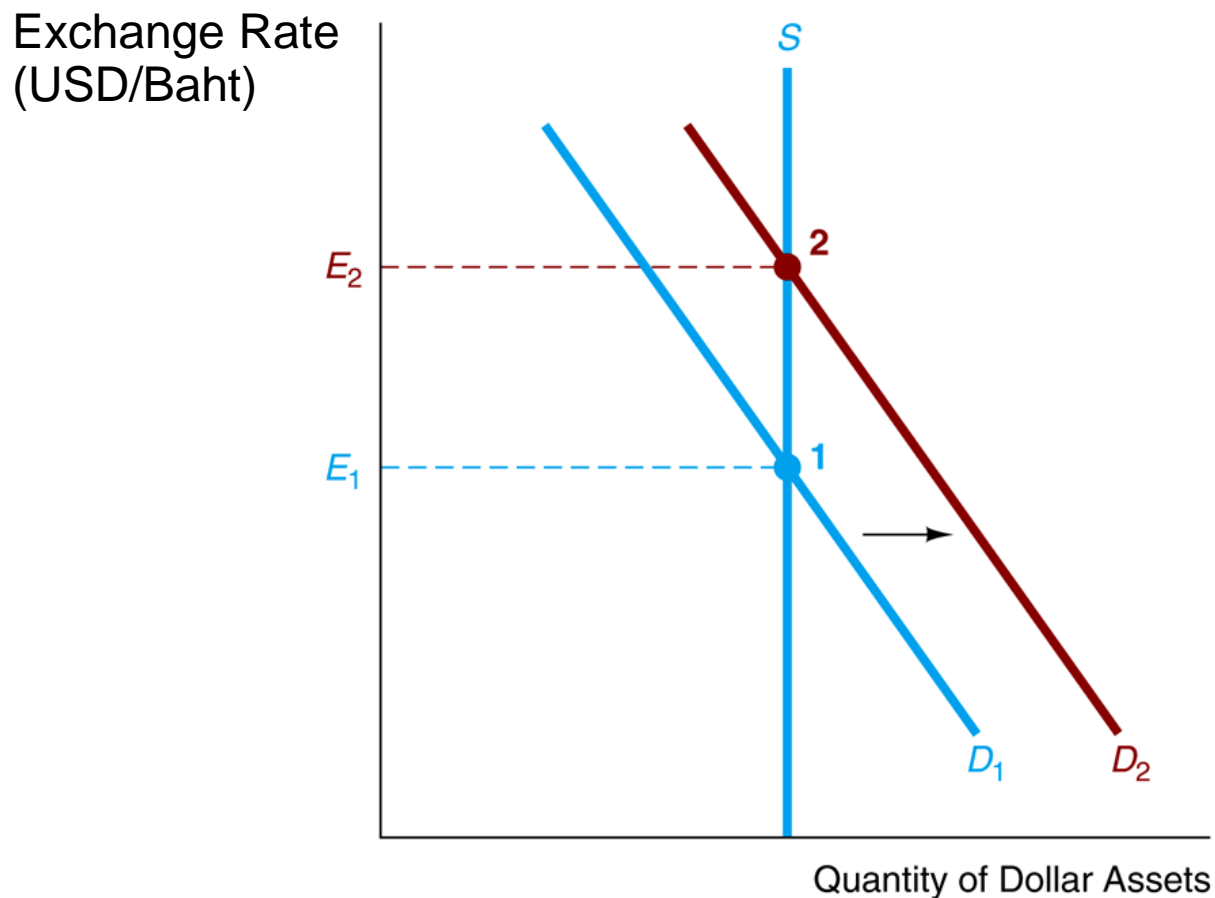


FIGURE 5 Response to an Increase in the Foreign Interest Rate, i^F

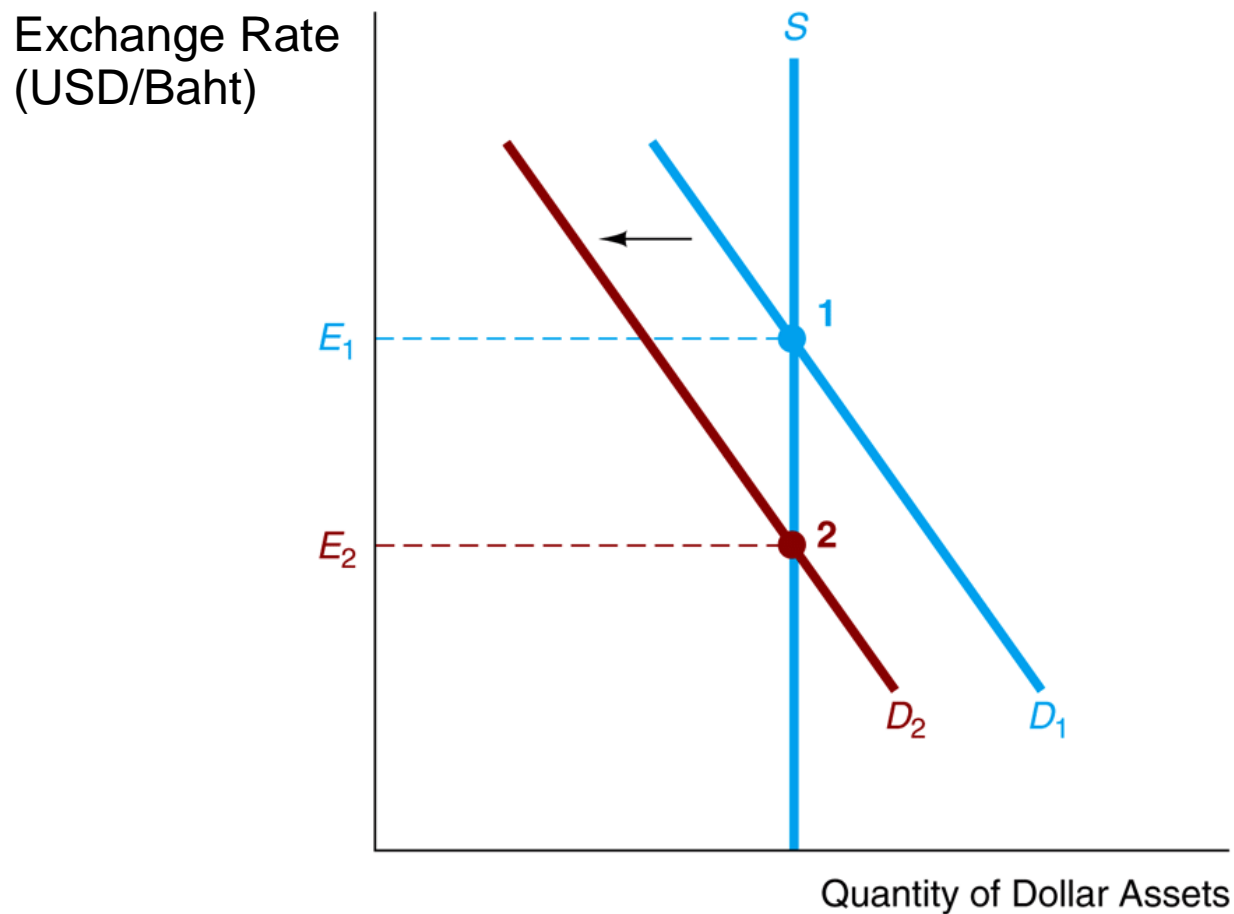
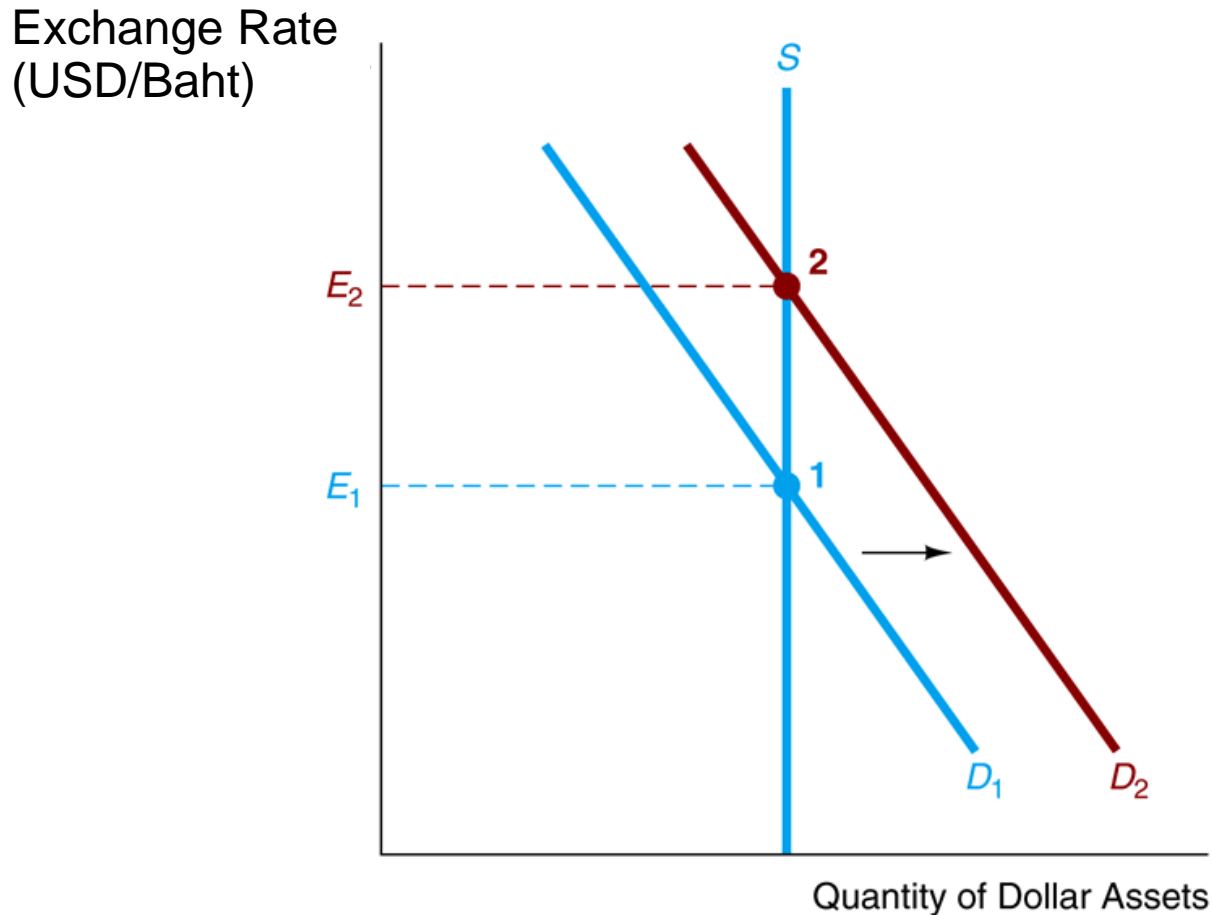


FIGURE 6 Response to an Increase in the Expected Future Exchange Rate, E^e_{t+1}



| Factor | Change in Factor | Change in Quantity Demanded of Domestic Assets at Each Exchange Rate | Response of Exchange Rate, E_t | |
|--------------------------------|------------------|--|----------------------------------|--|
| Domestic interest rate, i^D | ↑ | ↑ | ↑ | <p>A graph with 'Dollar Assets' on the horizontal axis and exchange rate E_t on the vertical axis. A vertical blue supply curve S is at a fixed quantity. Two downward-sloping demand curves are shown: a blue curve D_1 and a red curve D_2 to its right. The initial equilibrium is at E_1 and the new equilibrium is at E_2, which is higher than E_1.</p> |
| Foreign interest rate, i^F | ↑ | ↓ | ↓ | <p>A graph with 'Dollar Assets' on the horizontal axis and exchange rate E_t on the vertical axis. A vertical blue supply curve S is at a fixed quantity. Two downward-sloping demand curves are shown: a blue curve D_1 and a red curve D_2 to its left. The initial equilibrium is at E_1 and the new equilibrium is at E_2, which is lower than E_1.</p> |
| Expected domestic price level* | ↑ | ↓ | ↓ | <p>A graph with 'Dollar Assets' on the horizontal axis and exchange rate E_t on the vertical axis. A vertical blue supply curve S is at a fixed quantity. Two downward-sloping demand curves are shown: a blue curve D_1 and a red curve D_2 to its left. The initial equilibrium is at E_1 and the new equilibrium is at E_2, which is lower than E_1.</p> |
| Expected trade barriers* | ↑ | ↑ | ↑ | <p>A graph with 'Dollar Assets' on the horizontal axis and exchange rate E_t on the vertical axis. A vertical blue supply curve S is at a fixed quantity. Two downward-sloping demand curves are shown: a blue curve D_1 and a red curve D_2 to its right. The initial equilibrium is at E_1 and the new equilibrium is at E_2, which is higher than E_1.</p> |
| Expected import demand | ↑ | ↓ | ↓ | <p>A graph with 'Dollar Assets' on the horizontal axis and exchange rate E_t on the vertical axis. A vertical blue supply curve S is at a fixed quantity. Two downward-sloping demand curves are shown: a blue curve D_1 and a red curve D_2 to its left. The initial equilibrium is at E_1 and the new equilibrium is at E_2, which is lower than E_1.</p> |
| Expected export demand | ↑ | ↑ | ↑ | <p>A graph with 'Dollar Assets' on the horizontal axis and exchange rate E_t on the vertical axis. A vertical blue supply curve S is at a fixed quantity. Two downward-sloping demand curves are shown: a blue curve D_1 and a red curve D_2 to its right. The initial equilibrium is at E_1 and the new equilibrium is at E_2, which is higher than E_1.</p> |
| Expected productivity* | ↑ | ↑ | ↑ | <p>A graph with 'Dollar Assets' on the horizontal axis and exchange rate E_t on the vertical axis. A vertical blue supply curve S is at a fixed quantity. Two downward-sloping demand curves are shown: a blue curve D_1 and a red curve D_2 to its right. The initial equilibrium is at E_1 and the new equilibrium is at E_2, which is higher than E_1.</p> |

*Relative to other countries.

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