

8. International Economics

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1 Balance of Payment

- The record of a country transactions in goods, services, and assets with the rest of the world.
- The record of a country's sources (supply) and uses (demand) of foreign exchange
- Composition of BOP **account**
 1. Current Account : \$ flow in (+), \$ flow out (-)
 2. Capital and Financial Account : \$ flow in (+), \$ flow out (-)
 3. International Reserve Account : change in international reserve

1.1 The current account (CA)

1. Trade in good account: record of foreign exchange receive and payment from the country's export and import of good
2. Trade in service account: record of foreign exchange receive and payment from the country's export and import of services (such as, transportation, travel, government service and other services)
3. Income Account: record of foreign exchange income receipts and income payments from compensation of employees and investment income (such as dividends, interest, rent, and profits)
4. Transfer Account: record of transfer receive and payment from private and government sectors (such as, parents transfer money to children staying abroad, donation from Thai government to other countries, and donation of other countries to Thailand)

$$\text{Current Account Balance} = \text{Trade in Goods Balance} + \text{Trade in Service Balance} + \text{Income Balance} + \text{Transfer Balance}$$

1.2 The capital account

- It records purchases and sales of foreign assets and purchases and sales of domestic assets by foreign residents (for example, a Thai resident that buys a US bond for \$100 will enter with a minus into the capital account (-\$100 converted into Bahts according to the exchange rate). A US resident that buys a Thai government bond for Bht.100 will enter with a plus into the capital account, and so on).
- Public Borrowing/ Lending , Private Borrowing/ Lending, Portfolio investment, Direct investment

$$\text{Capital Account Balance} = \text{Capital Inflow} - \text{Capital outflow}$$

$$\text{Balance of Payments} = \text{Current Account Balance (CA)} + \text{Capital Account Balance (KA)}$$

1.3 Official reserve transactions

- Shows changes of the country international reserve during one period resulting from the adjustment of difference between total receipt and payment of foreign exchange for current account and capital and financial account.

- International reserve consist of Gold, major foreign currency, foreign currency assets, special drawing right (SDR) and reserve with the IMF.
 - Note: SDRs are potential claims on the freely usable currencies of IMF members.
 - SDRs are used as a unit of account by the IMF and several other international organizations.
- Changes in official reserve assets at the central bank due to activities in the current account and the capital account.

$CA + KA > 0 \Rightarrow \text{BOP Surplus} \Rightarrow \text{International Reserve} \uparrow$

$CA + KA < 0 \Rightarrow \text{BOP Deficit} \Rightarrow \text{International Reserve} \downarrow$

	Credit(+) [\$ flow in]	Debit(-) [\$ flow out]
1. Current Account (goods, service, income, transfer)		
2. Capital Account portfolio investment and direct investment		
Total	total \$ flow in	total \$ flow out
3. Change in international Reserve	CA + KA = BOP = change in international reserve	

2 Market for foreign exchange

- Meaning: Foreign exchange rate is the price of foreign currency compared to domestic currency.
 - For example, amount of Baht per one dollar = 31 Baht per 1 US\$.
- There two ways to quote an exchange rate:
 1. Indirect Quote : The relative price of domestic currency in terms of foreign currency:
 - For example, 715 Vietnamese Dong per 1 Baht
 2. Direct Quote : The relative price of foreign currency in terms of domestic currency.
 - For example, 31 Baht per 1 US\$
- We consider only “**Direct quote**” . Let e = exchange rate (direct quote).
 - **Appreciation** : the domestic currency is more expensive
 - * Baht appreciates from 30 Baht to Baht per US\$, exchange rate (ER),
 - **Depreciation** : the domestic currency is cheaper,
 - * Baht depreciates from 30 Baht to Baht per US\$, exchange rate (ER)
- Why exchange rate is important?
 1. Exchange rate is essential for payment of goods and services between trading partners in different countries
 2. Changes in exchange rate affect the country export and import, international investment

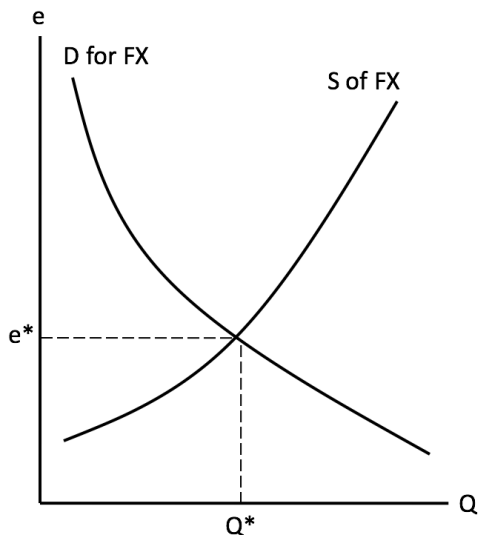
Then, can affect CA balance and KA balance, production, employment, and national income
- Exchange rate system
 1. Fixed (Pegged) Exchange rate System*: Exchange rates are determined by central bank (fix at a particular value)
 2. Managed Floating Exchange Rate: The central bank seeks to have some stabilizing influence on the exchange rate, but does not try to fix it at some publicly announced value.
 3. Floating (market-determined) Exchange Rate System*: Exchange rates are determined by the unregulated forces of supply and demand.

- 1963 : Original float
- 20 October 1973, Fixed or Pegged exchange rate system : 20.80 Baht/ 1 USD
- 1978, Basket of currency
- 1984 - 1990, Revise basket twice
- 1990 - 1997, Exchange Rate Equalization Fund (EEF) defend Baht Value against USD
- 2 July 1997, Managed float exchange rate regime

2.1 Floating exchange rate system: the exchange rates that are determined by market

- the exchange rates that are determined by market

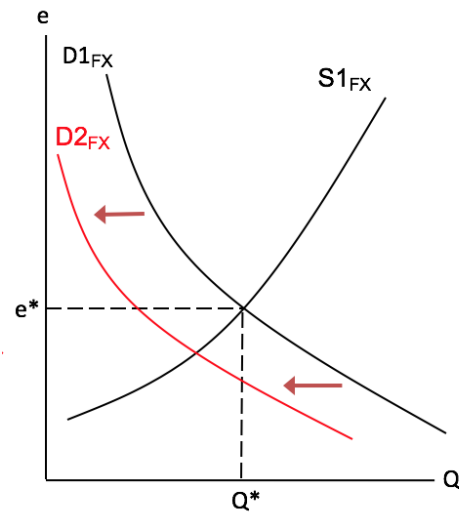
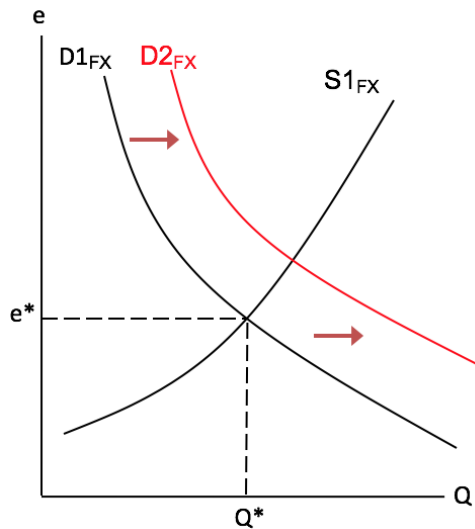
	Demand for FX	Supply of FX
Source	Demand for goods, services produced by [.....] Demand for assets. $(1+r) \dots \frac{(1+r^*)e_{t+1}}{e_t}$ Portfolio investment Direct investment	Demand for goods, services produced by [.....] Demand for assets. $(1+r) \dots \frac{(1+r^*)e_{t+1}}{e_t}$ Portfolio investment Direct investment
	$e \uparrow \Rightarrow D_{FX} \dots \dots$	$e \uparrow \Rightarrow S_{FX} \dots \dots$ [Assume $ \epsilon_X^d > 1$.]
FX Intervention	Central bank more foreign currency reserves \Rightarrow D of \$ increases (shift to the right)	Central bank more foreign currency reserves \Rightarrow S of \$ increases (shift to the right)



- Change in Exchange Rate \Rightarrow **Movement Along** D and S curve
- Equilibrium Exchange Rate
 - $e \dots e$: Excess Demand for \$, BOP
 - $e \dots e^*$: Excess Supply of \$, BOP
 - At $e = e^*$, $D_{FX} = S_{FX}$, BOP
- Change in the other factors determining D and S for \$ \Rightarrow **Shift** in D and S curve \Rightarrow Change in Equilibrium

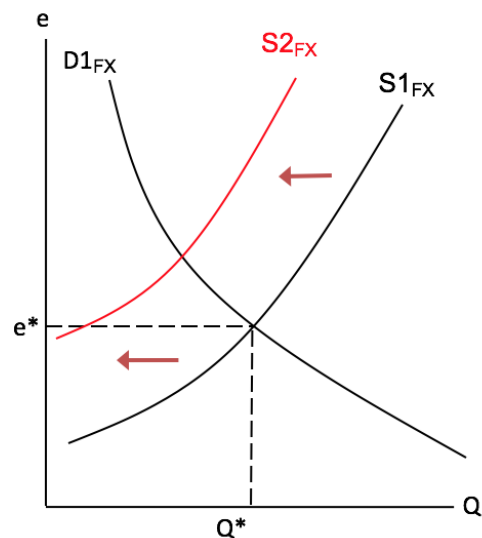
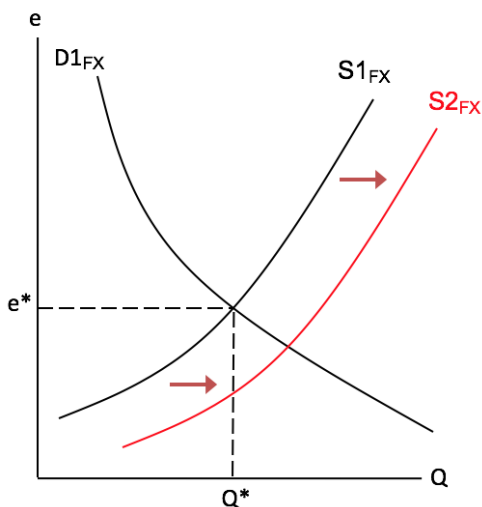
Changes in Equilibrium : Shifts in Demand or supply

1. Demand Shifts



- At the original equilibrium exchange rate e_1^* , Demand for FX = Supply of FX. Balance of Payments 0. FX flows in FX flows out.
- Demand for FX shifts to the right, caused by
 - Quantity demand for FX increases for all levels of e .
 - At the original e^* , there is excess demand for FX. Balance of Payments 0. FX flows in FX flows out.
- There is excess demand for FX at e_1^* . Competition in the market will drive e to e_2^* .
- As e increases, excess demand for FX
- At new e_2^* , D for FX S of FX. Balance of Payments 0. FX flows in FX flows out.

2. Supply Shifts

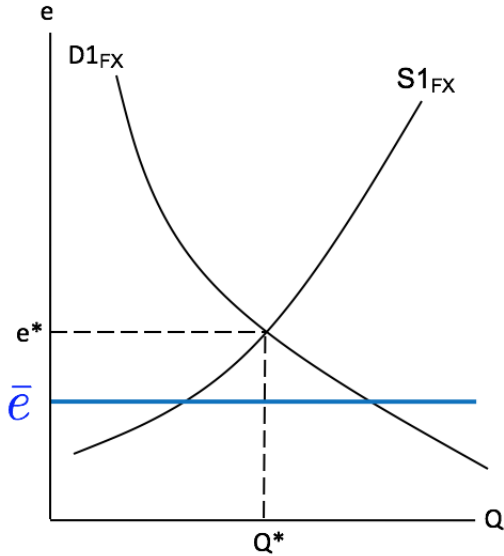


Examples : How does each of these situations affect Baht exchange rate?

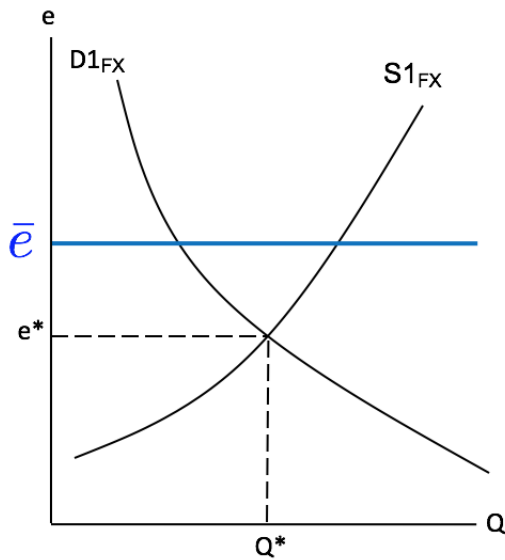
- Thailand imports more US products
- Foreigners invest more in Thai stock market
- Domestic price of export goods (such as rice) decreases and Thailand rice export increase [export more rice].
- Foreign price of import goods (such as machine) decreases and Thailand value of machine import increase [import more machines].
- Changes in overall price level
 - Case of equal inflation in both countries
 - Case of inflation in only one country
 - Case of inflation at unequal rates
- Interest rate in Thailand increases so that it is more than interest rates in other ASEAN countries
- Interest rate in Thailand decreases so that it is more than interest rates in other ASEAN countries

2.2 Fixed exchange rate system: Exchange rates are determined by central bank (fix at a particular value)

Authority makes an announcement in advance for a targeted level of exchange rate.



- The official exchange rate (\bar{e}) is below e^* .
- Domestic currency is overvalued.
- There is excess FX. Balance of Payments 0. FX flows in FX flows out.
- Hence the Central Bank need to FX
- Loss of FX reserve. BOP 0.
- At (\bar{e}), BOP 0 and FX flows in FX flows out.
- Devaluation of Domestic currency



- The official exchange rate (\bar{e}) is above e^* .
- Domestic currency is undervalued.
- There is excess FX. Balance of Payments 0. FX flows in FX flows out.
- Hence the Central Bank need to FX
- Accumulation of FX reserve. BOP 0.
- At (\bar{e}), BOP 0 and FX flows in FX flows out.
- Revaluation of domestic currency.