

Open Macroeconomics

Balance of Payment

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$$\text{Current Account (CA)} = \text{Trade Balance} \\ + \text{Income Balance} \\ + \text{Net Unilateral Transfer}$$

Trade Balance (TB):

Difference between export and import of goods and service

$$\text{Trade Balance} = \text{Export of Goods and Services} \\ - \text{Import of Goods and Services}$$

the same as net export

Income Balance:

Difference between factor incomes received from and paid to the rest of the world

$$\text{Income Balance} = \text{Net Investment Income} + \text{Net International Payments to Employees}$$

Net Unilateral Transfer

Difference between gifts received from and given to the rest of the world

$$\begin{aligned}\text{Financial Account (FA)} = & \text{(Increase in Foreign-owned} \\ & \text{Domestic Assets)} \\ & - \text{(Increase in Domestic-owned} \\ & \text{Assets Abroad)}\end{aligned}$$

Fundamental Balance of Payment (BOP)

$$\text{Current Account} = - \text{Financial Account}$$

with government, the BOP becomes

$$\text{Current Account} = - \text{Financial Account} + \text{Change in Reserves}$$

Net International Investment Position (NIIP)

$$\text{NIIP} = \text{Foreign Asset Position} \\ - \text{Foreign Liability Position}$$

NIIP is a stock variable

CA deficits may lead to negative NIIP:

$$\Delta \text{NIIP} = \text{CA} + \text{valuation changes}$$

Alternative expressions:

$$TB_t = Y_t - A_t$$

$$CA_t = rB_{t-1} + TB_t$$

$$CA_t = B_t - B_{t-1}$$

$$CA_t = S_t - I_t$$

where S is national savings, I is domestic investment, B_t is net foreign asset position at the end of period t , Y is national income, A is **domestic absorption** defined as $A = C + I + G$, where C is private consumption and G is government spending