Balance of Payments (3/2/2012) Econ 390-001

Equations

- Balance of Payments
  - $CA + FA + KA = 0$ — BoP identity
  - $TB + NFIA + NUT + FA + KA = 0$ — BoP identity
  - $CA = TB + NFIA + NUT$ — current account
- Approaches
  - $GNE = C + I + G$ — gross national expenditure (expenditure approach)
  - $GDP = GNE + TB$ — gross domestic product (product approach)
  - $GNI = GDP + NFIA$ — gross national income (income approach)
  - $GNDI = GNI + NUT$ — gross national disposable income
  - $GNDI = GNE + CA$ — gross national disposable income ($CA = TB + NFIA + NUT$)
  - $GNE = GNDI + FA + KA$ — gross national expenditure ($-CA = FA + KA$)
- Components
  - $TB = EX - IM$ — trade balance
  - $NFIA = EX_{FS} - IM_{FS}$ — net factor income from abroad
  - $NUT = UT_{IN} - UT_{OUT}$ — net unilateral transfers
  - $FA = EX_A - IM_A$ — financial account
  - $KA = KA_{IN} - KA_{OUT}$ — capital account
- Savings/Investment
  - $S = S_P + S_G$ — total saving
  - $S_P = Y - T - C$ — private saving
  - $S_G = T - G$ — government saving
  - $S = I + CA$ — saving/investment
    - derivation
      - $Y = C + I + G + CA$ — derivation
      - $Y - C - G = I + CA$ — derivation
    - insight ("iff" means "if and only if")
      - $S > I$ iff $CA > 0$ — current account surplus
      - $S < I$ iff $CA < 0$ — current account deficit
- Twin deficit
  - $S_P + S_G = I + CA$ — twin deficit
  - $CA = (S_P - I) + S_G$ — twin deficit
- Insights/definitions
  - trade
    - $TB > 0$ — trade surplus
    - $TB < 0$ — trade deficit
  - current account
    - $CA > 0$ — current account surplus
    - $CA < 0$ — current account deficit
  - financial account
    - $FA > 0$ — financial account surplus
    - $FA < 0$ — financial account deficit
  - government
    - $SG > 0$ — government budget surplus
    - $SG < 0$ — government budget deficit

Definitions

- ***balance of payments*** (BoP) – net movement of funds between a nation and a foreign country
- ***gross national expenditure*** (GNE) – total national spending on final goods and services
- ***personal consumption*** (C) – total household spending on final goods and services
- ***gross private domestic investment*** (I) – total spending by firms and households on final goods and services that add to the nation's capital stock
- ***government consumption expenditures and gross investment*** (G) – government spending on final goods and services, including additions to the capital stock
- ***gross domestic product*** (GDP) – total value added of all production
- ***value added*** – income paid to factors of production; sales – intermediate purchases
- ***gross national income*** (GNI) – income of all nationals within a country
- ***trade balance*** (TB) – exports minus imports
- ***net factor income from abroad*** (NFIA) – one country is paid income by another, in compensation for labor, capital, and land (e.g., wages, interest, dividends);
- ***net unilateral transfers*** (NUT) – net amount of transfers the country receives from the rest of the world
- ***gross national disposable income*** (GNDI) – income available including transfers
- ***financial account*** (FA) – asset exports minus asset imports
- ***capital account*** (KA) – assets transferred / received as gifts
- ***current account*** (CA) – net movement of goods and services between a nation and a foreign country; sum of the trade balance, net factor income from abroad, and net unilateral transfers

Principles

- In a closed economy there is no international trade and no international financial movements.
  - GNE = GDP = GNI = GNDI
  - TB = NFIA = NUT = 0
- In an open economy GNE, GDP, and GNI need not be equal.
  - Transactions in the balance of payments affect the flow of spending, income, and production.
- GNE to GDP (adding TB)
  - Some home spending is on foreign goods and some foreign spending is on home goods.
  - We must deduct imports and adds exports to GNE to calculate the total payments received by home firms.
- GDP to GNI (adding NFIA)
  - Some home GDP might be produced using "imported" foreign factors and some foreign GDP might be produced using "exported" home factor.
  - We must subtract factor service imports and add factor service exports to GDP to calculate income received by home.
- GNI to GNDI (adding NUT)
  - Country's disposable income may differ from income earned due to unilateral transfers paid to and received from abroad (e.g., immigrants sending money to their family abroad).
- CA to BoP (adding FA and KA)
  - Income is not the only resource by which an open economy can finance expenditure.
  - The economy can affect its spending power by exporting or importing assets internationally. Alternatively spending power can be affected by transferring or receiving assets as gifts.
- So in the open economy you can go from GNE to GDP to GNI to GNDI and back to GNE.