Saving and Investment in the Open Economy, Part 1

Balance of Payments Accounts

Balance of Payments Accounting

• The Balance of Payments Accounts are a summary of a country’s net international transactions.
  - Credit items represent international receipts.
  - Debit items represent international payments.

Agenda

• Balance of Payments Accounting.
• Goods Market Equilibrium in an Open Economy.
• Saving and Investment in a Small Open Economy.
Balance of Payments Accounting

• Basic Principles:
  ➢ Credit items (+) are funds flowing into a country:
    • Exports of goods and services,
    • Investment income on foreign assets owned by domestic residents,
    • Transfers to domestic residents,
    • Net purchases of domestic assets by foreign residents.
  ➢ This represents the demand for the domestic currency (in the foreign exchange market).

• Basic Principles:
  ➢ Debit items (–) are funds flowing out of a country:
    • Imports of goods and services,
    • Investment payments on domestic assets owned by foreign residents,
    • Transfers to foreign residents,
    • Net purchases of foreign assets by domestic residents.
  ➢ This represents the supply for the domestic currency (in the foreign exchange market).

• The Balance of Payments Accounts consists of:
  ➢ The current account balance, CA,
  ➢ The capital and financial account balance, KFA, and
  ➢ The official settlements account balance, OSA.

• The Current Account balance, CA, consists of:
  ➢ Net exports of goods and services (NX),
  ➢ Net income from abroad (NFP), and
  ➢ Net unilateral transfers (NUT).
Balance of Payments Accounting

• The Current Account balance, $CA$:

  ➢ Net exports of goods and services, $(NX)$:
    • Exports, $X$, (a credit item).
    • Imports, $M$, (a debit item).

    **MINUS**
    • For most countries, net exports, $X - M$, are the largest part of the current account and they are hugely negative for the U.S.

• Net income from abroad $(NFP)$:

  • Investment income on foreign assets owned by domestic residents, (a credit item).
  **MINUS**
  • Investment payments on domestic assets owned by foreign residents, (a debit item).

  • For most countries, net income from abroad is a relatively small part of the current account and is about equal to net factor payments, $NFP$.

• Net unilateral transfers $(NUT)$:

  • Transfers to domestic residents, (a credit item).
  **MINUS**
  • Transfers to foreign residents, (a debit item).

  • For some countries, net unilateral transfers are a substantial (positive) part of the current account; for the U.S., net unilateral transfers have been increasingly negative.

Balance of Payments Accounting

• The Current Account balance, $CA$, is given by:

$$CA = NX + NFP + NUT$$

➢ When $CA > 0$, there is a current account surplus.
  • More funds flowing into than out of a country.

➢ When $CA < 0$, there is a current account deficit.
  • Fewer funds flowing into than out of a country.
Balance of Payments Accounting

• The Capital and Financial Account balance, \( KFA \):
  
  - The capital and financial account balance is the net international transactions in existing real and financial assets.
    - Real assets like real estate.
    - Financial assets like stocks and bonds.

Balance of Payments Accounting

• The Capital and Financial Account balance, \( KFA \), consists of:
  
  - The Capital Account balance, and

Balance of Payments Accounting

• The Capital and Financial Account balance, \( KFA \):
  
  - The capital account balance is the net flow of unilateral transfers of assets into or out of a country.

Balance of Payments Accounting

• The Capital and Financial Account balance, \( KFA \):
  
  - The financial account balance is the net flow of:
    - Net purchases of domestic assets by foreign residents, (a credit item)
    - Net purchases of foreign assets by domestic residents, (a debit item).

  **MINUS**
  - Net purchases of foreign assets by domestic residents, (a debit item).

  - Most international transactions are in the financial account part of the capital and financial account.
Balance of Payments Accounting

- The Capital and Financial Account balance, \( KFA \):
  - Foreign direct investment:
    - A foreign firm buys or builds domestic capital goods.
    - Increases the capital and financial account balance.
  - Portfolio investment:
    - Foreigners acquire U.S. securities.
    - Increases the capital and financial account balance.

Balance of Payments Accounting

- The Official Settlements Account balance, \( OSA \):
  - The Official Settlements Account balance is the net transactions between central banks using official reserve assets to make international payments.
  - Official reserve assets include:
    - Foreign government securities,
    - Bank deposits, and
    - SDRs of the IMF, and
    - Gold.

Balance of Payments Accounting

- The Official Settlements Account balance, \( OSA \):
  - Central banks buy (or sell) official reserve assets with (or to obtain) their own currencies.
  - The \( OSA \) is also called the “balance of payments”.
    - The net change in a country’s official reserve assets.
      - The change in the domestic government’s reserve assets
      - The change in foreign central bank holdings of domestic assets.

Balance of Payments Accounting

- The Official Settlements Account balance, \( OSA \):
  - A balance of payments surplus means a country is increasing its official reserve assets.
  - A balance of payments deficit means a country is reducing its official reserve assets.
Balance of Payments Accounting

• The relationship between the CA and the KFA:

  ➢ Every exchange of goods, services, and/or assets requires a payment.

  ➢ Therefore, the current account plus the capital and financial account must sum to zero.

  \[ CA + KFA = 0 \]

Balance of Payments Accounting

• The relationship between the CA and the KFA:

  ➢ In practice, \( CA + KFA \) does not equal 0 because of measurement problems.

    • These are recorded as a statistical discrepancy.

Balance of Payments Accounting

• Net foreign assets and the balance of payments accounts:

  ➢ Net foreign assets are a country’s total foreign assets minus its total foreign liabilities.

    • Net foreign assets can change because of the acquisition or disposition of new assets or liabilities.

    • Net foreign assets may also change because of an change in the value of existing assets or liabilities.

Balance of Payments Accounting

• Net foreign assets and the balance of payments accounts:

  ➢ The net increase (decrease) in foreign assets equals a country’s current account surplus (deficit).

    • A current account surplus implies a capital and financial account deficit, and a net increase in holdings of foreign assets (a financial outflow).

    • A current account deficit implies a capital and financial account surplus, and a net decline in holdings of foreign assets (a financial inflow).
Balance of Payments Accounting

• Equivalent measures of a country’s international trade and finance:
  
  - Current account surplus (deficit):
    - capital and financial account deficit (surplus), or
    - net acquisition (disposition) of foreign assets, or
    - net foreign lending (borrowing), or
    - net exports surplus (deficit)
  
  - If NFP and NUT are zero.

Balance of Payments Accounting

• The United States as an international debtor:
  
  - Foreign liabilities of the U.S. have risen very sharply since the early 1980s.
    - The US is now the world’s largest international debtor.

Balance of Payments Accounting

• The United States as an international debtor:
  
  - The net foreign debt of the United States is relatively small (18%) relative to U.S. GDP.
    - Several other countries have net foreign debt of over 100% of their GDP.

Balance of Payments Accounting

• The United States as an international debtor:
  
  - Despite the large net foreign debt, the US has direct foreign investment in other countries about equal in size to other countries’ foreign direct investment in the US.
    - This implies that most foreign acquisition of US assets has been portfolio investment.
Balance of Payments Accounting

- The United States as an international debtor:
  - What matters is not size of net foreign debt but a country’s wealth (physical & human capital).
  - If net foreign debt rises but wealth rises just as fast or faster, there’s no problem.
  - But US wealth is not rising as quickly as net foreign debt is, which is worrisome.

Goods Market Equilibrium, Open Economy

- National saving is given by:
  \[ S = I + CA = I + (NX + NFP) \]
  - National saving has two uses:
    - Increase the capital stock by domestic investment.
    - Increase net foreign assets by lending to foreigners.
  - For simplicity, assume \( NFP = NUT = 0 \).

Goods Market Equilibrium, Open Economy

\[ S = I + CA = I + NX \]
- Goods market equilibrium requires that national saving and investment must equal their desired levels:
  \[ S^d = I^d + NX \]
  - or
  \[ I^d = S^d - NX \]
  - or
  \[ NX = S^d - I^d \]

Goods Market Equilibrium, Open Economy

- Alternatively:
  \[ Y = C + I^d + G + NX \]
  - or
  \[ NX = Y - (C + I^d + G) \]
  - Net exports equal output minus absorption.
Saving and Investment in a SOE

- *A small open economy*, SOE, is an economy too small to affect the world real interest rate.

- World real interest rate \( r^w \):
  - The world real interest rate is the real interest rate in the international capital markets.

- **Key assumption**: Residents of a SOE can borrow or lend any amount at the expected \( r^w \).

\( r^w \) may be such that \( S^d > I^d \), \( S^d = I^d \), or \( S^d < I^d \).

- If \( S^d > I^d \), the excess saving is lent internationally.
  - Net foreign lending is positive and \( NX > 0 \).

- If \( S^d = I^d \), there is no net foreign lending and \( NX = 0 \).

- If \( S^d < I^d \), the excess investment is financed by borrowing internationally.
  - Net foreign lending is negative and \( NX < 0 \).

A SOE that lends abroad

A SOE that borrows from abroad
Saving and Investment in a SOE

- Economic shocks in a SOE.
  - Anything that increases desired national saving, or
    - Output rises, future output falls, \( G \) falls, etc.
  - Anything that decreases desired investment.
    - \( MPK' \) falls, \( r \) rises, etc.

An increase in desired saving in a SOE

An increase in desired investment in a SOE
Saving and Investment in a SOE

- Effects of economic shocks in a SOE:
  - An increase in desired investment (at a given world interest rate):
    - Reduces the current account balance and
    - Reduces net foreign lending/increase net foreign borrowing.

Key Diagram: Saving, Investment in a SOE