



International Finance

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#2. Chapter 2: The balance of payments

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Objectives

- To learn two essential tools to understand macroeconomic linkages between countries.

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- (1) National Income Accounting:
 - A useful tool to understand the cause of business cycle of an economy.
 - Without this tool, we cannot say anything about which kind of policy response we should use to a particular recession or boom of the economy.

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Objectives (cont'd)

- (2) Balance of Payments:
 - An important analytical tool when we consider the external relationship of a country concerned.
- Questions:
 - The US has recorded huge amount of trade deficits for the last several decades. Is it sustainable?
 - Without the understanding of the balance of payments as well as the national income accounting, we cannot answer the above question.

Case Study 1: Trade Friction between Japan and the US

- Background:
 - Japan records large amounts of trade surplus to the World, especially to the US, for the last few decades.
 - The yen/dollar exchange rates appreciated sharply from 1985.
 - But, Japan's trade surplus did not decline. It actually increased from 1984 to 1987.

Trade Friction between Japan and the US (cont'd)

- The US government wanted to reduce the trade deficit against Japan in the 1980s.
- In 1985, G7 countries agreed to the depreciation of the US dollar (“Plaza Accord”).
- Did the depreciation of the US dollar surely reduce the trade deficit against Japan?
 - No. (See Figures)
 - Why US trade deficits did not decline even after a sharp depreciation of the dollar?

Two different views

- 1) Exchange rate works for the adjustment of trade account imbalances.
 - But, as Figures show, exchange rates did not work well for such adjustments
- 2) Trade surplus/deficit is determined by the saving and investment relationship of a country concerned.
 - Need to understand the National Income Accounting.

Balance of Payments

- Questions:
 - Why is a government typically concerned about a large current account deficit (or surplus)?
 - How does the US finance its large amount of trade deficit?
 - The US has not been in danger of repaying its foreign debt even though it continues to record large amount of trade deficits. In contrast, developing economies often get into danger in repaying foreign debts and suffer from capital flight, if they have large trade deficits for several years. Why?

Balance of Payments (BOP)

- A balance of payments accounts keep track of both a country's payments to and its receipts from foreigners.
 - Debit (-): a **negative sign** any transaction resulting in a payment. →
 - Credit (+): a **positive sign** any transaction resulting in a receipt from foreigners. →
- Rule of double-entry bookkeeping:
 - Every international transaction automatically enters the balance of payments twice, once as a credit and once as a debit.

Three types of transactions recorded in BOP (1)

1. Current account:

- Transaction that involve the export or import of goods or services.

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• How to record the transactions:

- Debit (-): importing goods and services
→ Payment to foreigners.

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- Credit (+): exporting goods and services
→ Receipt from foreigners.

Three types of transactions recorded in BOP (2)

2. Financial account:

- Transactions that involve the purchase or sale of financial assets (e.g. FDI, portfolio investment, international bank loans, etc).
- How to record the transactions:
 - Debit (-): importing (purchasing) assets.
 - Credit (+): exporting (selling) assets.

Three types of transactions recorded in BOP (3)

3. Capital account:

- Certain other activities resulting in transfers of wealth between countries.
- E.g. The US government forgives \$1 billion in debt owed to the government of the Philippines. The US wealth declines by \$1 billion, which is recorded as debt in the US capital account.

Example 1 of paired transactions

		Credit	Debit
Car purchase	Current account (US good import)		- USD 20,000
Sale of bank deposit	Financial account (US asset export)	+ USD 20,000	

- Example 1: US residents buy an automobile from Toyota with a USD 20,000 cheque.
 - Toyota's US salesperson deposits the check in Toyota's account at Citibank in US.
 - Toyota has received (imported), and Citibank has exported a US asset (cheque).

Example 2 of paired transactions

		Credit	Debit
Vietnam purchase of a MS share	Financial account (US asset export)	+ USD 1 million	
US deposit of Vietnam payment	Financial account (US asset import)		- USD 1 million

- Example 2: Vietnamese resident purchases a newly issued share of stock in Microsoft (MS) with a USD 1 million cheque.
 - Vietnamese acquisition of the MS stock create a USD 1 million credit in the US financial account.
 - Vietnamese resident has exported, and the US bank (Citibank) has imported, a Vietnamese asset (cheque).

Balance of Payments Accounts

- The fundamental Balance of Payments Identify:
 - Current Account + Financial Account + Capital Account = 0
- A detailed description of the balance of payments accounts:
 - Must see Table 12-2 in Krugman & Obstfeld, *International Economics: Theory and Policy*, Seventh Edition, 2006, p.295.

Table 12-2: US balance of payments accounts for 2003 (billions of USD)

		Credit	Debit
Current Account	1) Exports	+1,314.9	
	2) Imports		-1,778.1
	3) Net unilateral transfers		-67.4
	Balance on C.A. (= 1+2+3)		-530.7
Capital Account	4)		-3.1
Financial Account	5) US assets held abroad		-283.4
	6) Foreign assets held in US	+829.2	
	Balance of F.A (= 5+6)	+545.8	
	Statistical discrepancy		-12.0

Statistical Discrepancy

- Definition:
 - The sum of (i) current account balance, (ii) capital account and (iii) financial account balance, with opposite sign.
- Why the sum is not equal to zero given the rule of double-entry bookkeeping?
 - Information about the offsetting debit and credit items associated with a given transaction may be collected from different sources.
 - It is notoriously difficult to keep track of the complicated financial transactions (i.e. financial account) between residents of different countries.

Official Reserve Transactions

- **Definition:**
 - The purchase or sale of official reserve assets by central bank
- **Official international reserves:**
 - Foreign assets (mainly US dollar assets) held by central banks as a cushion against national economic misfortune.
- **Official foreign exchange intervention:**
 - Central banks often buy or sell international reserves in private asset markets to affect macroeconomic conditions in their economies.

Example 3 of paired transactions

		Credit	Debit
US purchase of a Germany car	Current account (US good import)		- USD 1 million
Bundesbank buys \$ assets	Financial account (US asset export)	+ USD 1 million	

- Example 3: A US auto dealer imports a car from Germany, and Bundesbank purchases a US \$ 1 million cheque from German car seller.
 - German car seller receives a US \$ 1 million cheque from US auto dealer. Bundesbank buys the cheque in exchange for German money
 - Bundesbank's international reserves rise by US \$ 1 million.

Official Reserve Transactions (cont'd)

- Balance of Official Reserve Transactions:
 - US balance of ORT = (i) – (ii)
 - (i) = The net increase in foreign official reserve claims on the US
 - (ii) = The net increase in the US official reserves.
- See Table 12-2. \$250.1 billion (= \$248.6+\$1.5) balance is the US BORT in 2003.

Official Reserve Transactions (cont'd)

- Official Settlements Balance:

(= Balance of Payments)

- The bookkeeping offset to the balance of official reserve transactions (ORT).
- It indicates the payment gap that official reserve transactions need to cover.
- See Table 12-2. \$250.1 billion balance is to measure the degree to which monetary authorities in USA and abroad joined with other lenders to cover the US current account deficit.

Table: Calculating the US Official Settlements Balance for 2003 (USD billion)

		Credit	Debit
Current Account	1) Balance on current account		-530.7
Capital Account	2) Balance on capital account		-3.1
Non-reserve F.A.	3) Balance on N.F.A	+295.7	
	4) Statistical discrepancy		-12.0
	5) Official settlements balance (= Balance of Payment) (= 1+2+3+4)		-250.1
Official reserve transactions (ORT)	6) US official reserve assets held abroad (increase -)	+1.5	
	7) Foreign official reserve assets held in US (increase +)	+248.6	
	Balance of ORT (= 6 + 7)	+250.1	16

Official Reserve Transactions (cont'd)

- Official Settlements Balance:
 - It played an important historical role as a measure of disequilibrium in international payments, and for many countries it still plays this role.
 - E.g. A negative official settlements balance (a deficit) may signal a crisis (If a country continues to run a deficit for years), because it means that a country is running down its international reserve assets or incurring debts to foreign monetary authority. (See the above Table).

GDP Components

- GDP is generally divided into 4 different types of expenditure.
 - $Y = C + I + G + (EX - IM)$
 - $Y = \text{GDP}$
 - $C = \text{Consumption}$
 - $I = \text{Investment}$
 - $G = \text{Government purchases}$
 - $EX - IM = CA = \text{Current account balance}$
 - The difference between export of goods and services and imports of goods and services.
 - Current account surplus: $EX > IM$.
 - Current account deficit: $EX < IM$.

National Income Identity: Saving and Current Account

- National saving (S)
 - A portion of output (Y) that is not devoted to household consumption (C) or government purchase (G).
 - $S = Y - C - G$
- Modified national income identity:
 - $Y = C + I + G + CA$
 - $(Y - C - G) = I + CA$
 - $S = I + CA$

National Income Identity: Saving and Current Account (cont'd)

- Implication 1:
 - $(S - I) = CA$
 - A country's current account balance is identically equal to national saving minus investment.
 - E.g. If a country's saving rate is quite high and, hence, national saving always exceeds investment, the country has a current account surplus.

National Income Identity: Saving and Current Account (cont'd)

- Implication 2:
 - Suppose there are only two countries in the world
 - If a country X has a current account surplus, it automatically means that country Y has a current account deficit. ($CA_Y < 0$)
 - If country Y , investment must exceed national saving. ($S_Y - I_Y < 0$).

National Income Identity: Private and Government Saving

- Private saving (S_p):
 - A part of disposable income that is saved.
 - $S_p = (Y - T) - C$ (T: net taxes)
- Government saving (S_g):
 - Net tax revenue minus government purchases.
 - $S_g = T - G$.

National Income Identity: Private and Government Saving (cont'd)

- Rewriting identity:

- $S = Y - C - G = (Y - C - T) + (T - G)$

- $= S_p + S_g$

- $S = S_p + S_g = I + CA$

- $CA = (S_p - I) - (G - T)$ <Equation 1>

- Implication:

- CA will increase, (1) If S_p exceeds I or (2) If government budget deficit $(G-T)$ decrease.

Case Study 1 (again!)

- Issue: the effect of government deficits on the current account.
- Example 1:
 - “Twin deficits” generated by the President Regan policies in the early 1980s.
 - By slashing taxes and raising government expenditures deficit and increased current account deficit.
 - The twin deficits story can be explained by using Equation 1.

Case Study 2

- Example 2:
 - European countries' efforts to cut their government budget deficits before the launch of their new currency, the euro.
 - Background: EU had agreed that a member country with a large government deficit could not adopt the euro.
 - We would have expected the EU's current account surplus to increase as a result of improvement in fiscal budget. Is it correct?



National Income Accounts for the whole EU (percentage of GNP)

Year	CA	Sp	I	G-T
1995	0.6	25.9	19.9	-5.4
1996	1.0	24.6	19.3	-4.3
1997	1.5	23.4	19.4	-2.5
1998	1.0	22.6	20.0	-1.6
1999	0.2	21.8	20.8	-0.8

Source: Organization for Economic Cooperation and Development, OECD Economics Outlook 68 (December 2000), Annex Tables 27, 30, and 52 (with investment calculated as the residual).

Case Study 2 (cont'd)

- Findings from Table:
 - While the government deficit (G-T) declined substantially from -5.4% in 1995 to -0.8% in 1999, the current account (CA) did not change much during the period.
 - Our logic based on Equation 1 cannot be applicable to the EU case.
 - Why?

Case Study 2 (cont'd)

- Reasons:
 - Equation 1 is just an identity, and is not based on any theory of economic behavior.
 - Private saving, investment, the current account, and the government deficit are jointly determined variables.
 - We cannot fully determine the cause of a current account change using Equation 1.

Case Study 3:

Current Account Imbalances

- “A saving grace” (The Economist, July 5th 2003, p.69).

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- This article discusses:
 - The recent decline in Japan’s saving rate.
 - Its effect on Japan’s current account surplus.

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Case Study 3:

- Example 3: Japanese Household Saving

- In the early 1980s, Japanese household were among the world's champion savers.
- Now, they are so no longer. Surprisingly, their saving rate is now roughly the same as that of Americans.
- Japanese household saving rate: 23% (1975) 14% (1990) 6.9% (2001) 2% (in the 1st quarter of ~~2003~~).
- Euro Area (typically above 10%), USA (3,5%).

Case Study 3 (cont'd)

- Such a sharp fall in saving seems puzzling, because:
 - 1) Deflation causes people to put off buying things in the expectation that they will be able to get them more cheaply next year.
 - 2) Japanese households have suffered from a slump in asset prices (a loss of wealth), so they should be saving more to rebuild their nest-eggs.
 - 3) As the Ricardian equivalence suggested, household should now be anticipating higher future taxes to repay the extra government debt, by saving more today

Case Study 3 (cont'd)

- Explanations for the fall saving over the past two decades:
 - 1) The life-cycle hypothesis: During their working years people spend less than they earn, leading to accumulation of wealth. More retired people there are, the lower the saving rate will be.
 - 2) Fall in inflation rate → People need to save less to maintain their real wealth. →
 - 3) The maturing in 2001 of a lot of high-yielding, ten-year postal savings deposits.
 - 4) Most of the fall in the saving rate is accounted for by those over 60 → The life-cycle hypothesis. →

Case Study 3 (cont'd)

- An economist at HSBC estimated:
 - Japan's rate could drop by another 5 percentage points from its 2001 level (6.9%).

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- Many economists forecasted:
 - US saving rate would rise to at least 6% over the next few years.

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- Question: Are they right?

Case Study 3 (cont'd)

- Question:

- If Japanese households continue to save less, will Japan's current account move into deficit?
- Answer → Not necessarily.

- Explanation:

- The behavior of households and government has been offset by a marked increase in saving by firms (see Figure of the handout).
- The corporate sector is running a big financial surplus, because firms have slashed investment and started to repay debts.

Case Study 3 (cont'd)

- Further Question:
 - What if business investment rebounds?
 - Would the current account surplus then vanish?
 - Again, not necessarily.
- Explanation:
 - Changes in the financial balance of one sector can cause offsetting shifts elsewhere.