

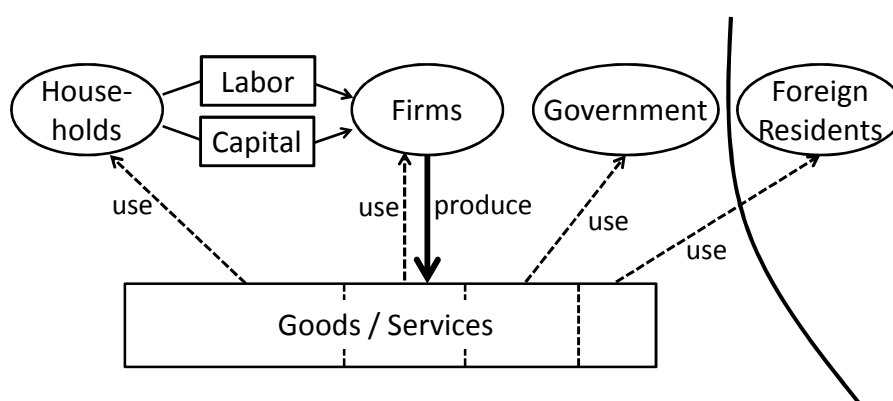
3543 Fiscal and Financial System in Japan A
/ KC3002 International Finance
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Lecture 2 National Income Accounting /
Balance of Payments

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Overview of the Economy



Part A: National Income Accounting

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Size and Contents of an Economy

1. How many goods and services are produced?
2. How are the goods and services used?
3. How are the values created allocated among the contributors to the production?

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Size of an Economy: GDP

Gross Domestic Product, GDP

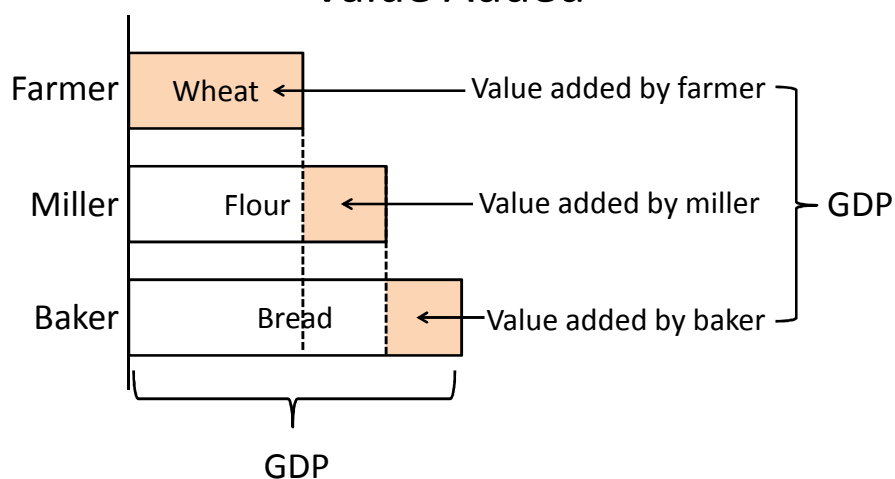
The value of all final goods and services produced within a country in a given time period

The value of intermediate goods is not counted because it is already included as part of the market price of the final goods.

Adding up the value added at each stage of production yields the same result.

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Value Added



Adding up all the values added is equal to adding up all the values of final goods.

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Contents of an Economy (1)

How are the goods/services allocated among alternative uses?

1. **Consumption (C)**
Some goods are bought by households and consumed.
2. **Investment (I)**
Some goods are bought by firms for future use/production.
3. **Government Purchases (G)**
Government also buys goods produced by private sector.
4. **Trade Balance (TB)**
Some are exported to foreign residents.

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Contents of an Economy: National Income Identity

GDP is calculated by adding up the market value of all the expenditures on final goods. (Expenditure Approach to GDP)

$$C + I + G + EX$$

Domestic residents spend on goods and services produced abroad (import), which are not part of GDP, and thus must be subtracted from the total expenditure.

$$C + I + G + \underbrace{EX - IM}_{TB} = Y$$

$$C + I + G + TB = Y$$

The identity can be viewed as showing (1) how the GDP is calculated and (2) how the GDP is allocated among alternative uses.

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What about unsold goods?

Part of the goods are left unsold, no money is spent on them.

Adding up the market value of all the expenditures does not equal with GDP?

The producer is assumed to have “purchased” those goods for inventory to be sold later, and thus this “pseudo-expenditure” is included in investment.

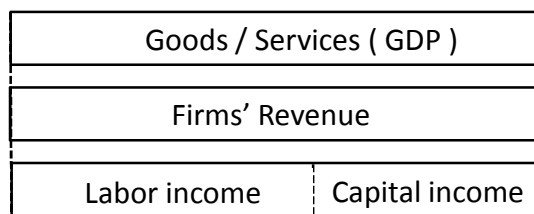
Question: What about the sales out of inventory in later years?

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Contents of an Economy (2)

Every transaction has a buyer and a seller, therefore every yen of expenditure by a buyer must become a yen of income to a seller.

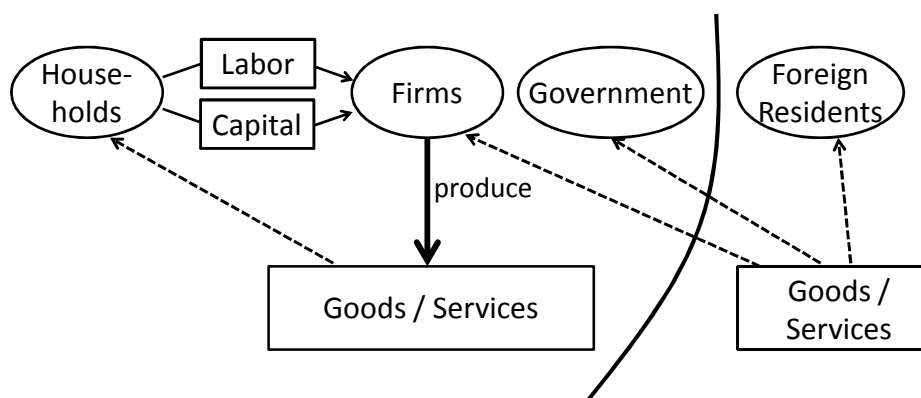
Adding up the payment to the factors of production – labor and capital – calculates GDP. (Income Approach to GDP)



GDP = Expenditure = Income

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Trade Balance Examined



It implies a relationship among a country's trade balance, production, and households', firms' and government's spending.

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Absorption Approach to Trade Balance

$$C + I + G + TB = Y$$

$$C + I + G + TB - (C + I + G) = Y - (C + I + G)$$

$$TB = Y - \underbrace{(C + I + G)}$$

absorption

- When a country runs a trade deficit (surplus), it always spends more (less) than it produces *by definition*.
- It does not claim a strong causality that a yen increase in absorption decreases TB by the same amount.
- There is a tendency that a country which spends more relative to its production runs a TB deficit or a small TB surplus.

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I-S Balance Approach to TB

$$Y = C + I + G + TB$$

disposable income $Y - T = C + I + G - T + TB$

household savings $Y - T - C = C - C + I + G - T + TB$

$$S = I + (G - T) + TB$$

$$S - I = \underbrace{(G - T)}_{\text{government budget deficits}} + TB$$

$$\boxed{\text{Private Savings}} = \boxed{\text{Government Budget Deficits}} + \boxed{\text{Trade Balance}}$$

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- Again, it does not claim any strong causality or one-to-one relationship among S-I, G-T, and EX-IM.
- It just claims that the portion that private sector put aside is used by government and/or foreigners, or the portion that private sector use beyond its means is supplied by government and/or foreigners.
- There is a tendency that
 1. a country where firms invest more runs a trade deficit or a government surplus,
 2. a country where government spends more runs a trade deficit.

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I-S Balance in Eurozone

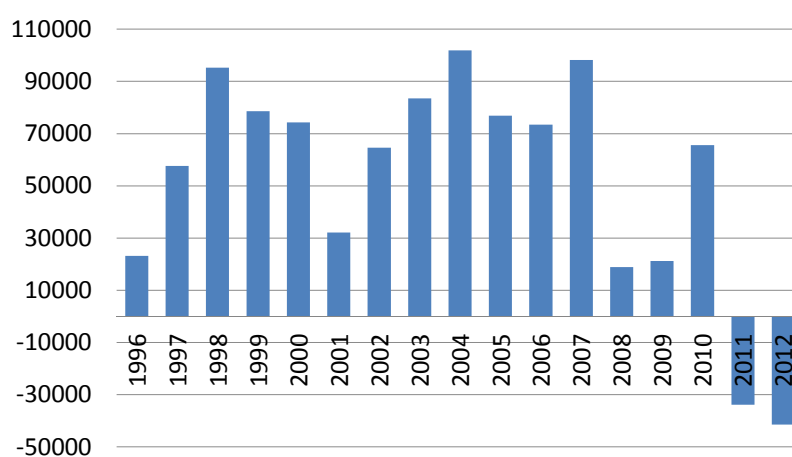
Year	S-I	G-T	CA
1995	6.0	5.4	0.6
1996	5.3	4.3	1.0
1997	5.0	2.5	1.5
1998	2.6	1.6	1.0
1999	1.0	0.8	0.2

Source: OECD Economic Outlook 68 (December 2000), annex tables 27, 30, and 52 (with investment calculated as the residual).

From Krugman, Obstfeld, and Melitz (2011), p.335.

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Japan's Trade Balance



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Question: Are Trade deficits Always Bad?

Absorption approach implies that in order to escape trade deficits, a country must spend just as much as it produces.

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Part B: Balance of Payments

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Balance of Payments Accounts

A country's balance of payments accounts keep track of its international transactions of goods, services, and assets in a given time period.

A country's balance of payments has three components:

- ✓ **the current account**, which records (1) exports and imports of goods and services, (2) international receipts and payments of income
- ✓ **the financial account**, which records sales of assets to foreigners and purchases of assets located abroad
- ✓ **the capital account**, which records capital transfers such as debt forgiveness and migrants' transfers.

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	Credits	Debits	Net Balance
(1)Current Account			
(2)Financial Account			
(3)Capital Account			
(4)Changes in Reserve Assets			
(5)Errors and Omissions			

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Credits and Debits

Exports enter with a plus (as a credit), and imports with a minus (as a debit).

Reductions in foreign assets / increases in foreign liabilities enter with a plus (as a credit), and increases in foreign assets / reductions in foreign liabilities with a minus (as a debit).

Transfers of goods/services by migrants leaving a country and debt forgiveness by foreigners enter with a plus, and transfers by migrants entering a country and debt forgiveness to foreigners with a minus.

(Generally small in the advanced countries' accounts.)

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Double-entry Bookkeeping

Every international transaction automatically enters the balance of payments twice: once as a credit (+) and once as a debit (-), on both sides of the account.

Examples of Paired Transactions 1

A French friend of yours comes to visit you in Yokohama and (a) stays at the Hotel New Grand. (b) He pays 25,000 yen for his lodging with his French VISA card.

- (a) Japan exports a service, a plus in the current account.
- (b) Japan imports French assets, a minus in the financial account.

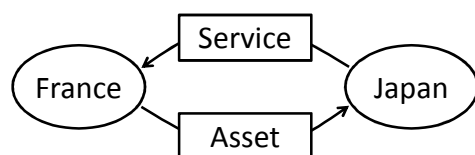
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Examples of Paired Transactions 2

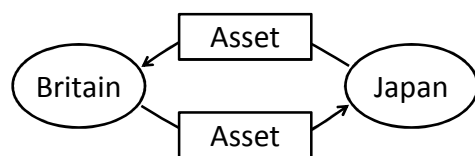
(a) A Japanese citizen buys a ¥400 newly issued share of stock in the United Kingdom oil giant British Petroleum by using a check drawn on his stockbroker money market account. (b) BP deposits the ¥400 in its Japanese bank account at Samurai Bank of Tokyo.

- (a) Japan imports British assets(stock), a minus in the financial account.
 (b) Japan exports Japanese assets(bank deposits), a plus in the financial account.

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	Credit	Debit
Current Account	¥ 25,000	
Financial Account		-¥25,000



	Credit	Debit
Current Account		
Financial Account	¥ 400	-¥400

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Fundamental BOP Identity

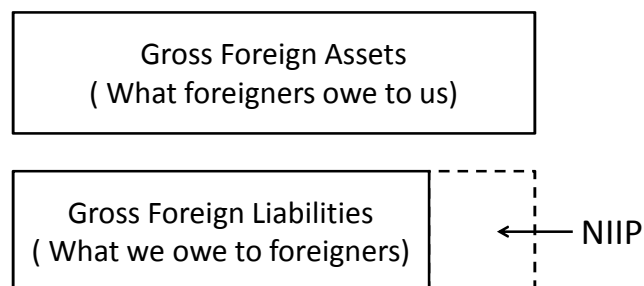
Any international transaction automatically gives rise to two offsetting entries in the balance of payments resulting in a fundamental identity:

$$\begin{array}{|c|} \hline \text{Current} \\ \text{Account} \\ \hline \text{Balance} \\ \hline \end{array} + \begin{array}{|c|} \hline \text{Financial} \\ \text{Account} \\ \hline \text{Balance} \\ \hline \end{array} + \begin{array}{|c|} \hline \text{Capital} \\ \text{Account} \\ \hline \text{Balance} \\ \hline \end{array} = 0$$

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Net International Investment Position

NIIP is a country's net foreign wealth, the difference between foreign assets owned by domestic residents and domestic assets owned by foreigners.



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Net International Investment Position

NIIP, US dollars, millions, 2011

Argentina	51,784.4	India	-206,232.6
Brazil	-735,291.4	Japan	3,255,405.3
Canada	-209,733.9	Korea	-97,121.0
China	1,774,746.2	Mexico	-330,094.5
Euro Area	-1,404,095.0	Russia	137,956.5
France	-410,502.7	Singapore	674,047.8
Germany	1,202,219.4	Turkey	-321,246.3
Italy	-445,734.3	UK	-303,711.2
Netherlands	321,536.7	US	-4,030,230.0
Spain	-1,279,744.7		

Source: IMF

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Net International Investment Position

NIIP, percent of GDP, 2011

Argentina	12.04	India	-12.40
Brazil	-32.99	Japan	54.02
Canada	-12.46	Korea	-9.04
China	23.71	Mexico	-32.20
Euro Area	-11.52	Russia	7.98
France	-15.90	Singapore	268.25
Germany	36.19	Turkey	-46.97
Italy	-21.79	UK	-12.96
Netherlands	41.25	US	-26.73
Spain	-92.45		

Source: IMF

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Current Account and *Changes* in NIIP

From the BOP identity,

$$\boxed{\begin{array}{c} \text{Current} \\ \text{Account} \\ \text{Balance} \end{array}} = - \left[\boxed{\begin{array}{c} \text{Financial} \\ \text{Account} \\ \text{Balance} \end{array}} + \boxed{\begin{array}{c} \text{Capital} \\ \text{Account} \\ \text{Balance} \end{array}} \right]$$

Current Account > 0 ↔ **Financial Account** ↔ Increase in NIIP
 + **Capital Account < 0**

The country imports more assets than it exports,
 thus increasing its NIIP.

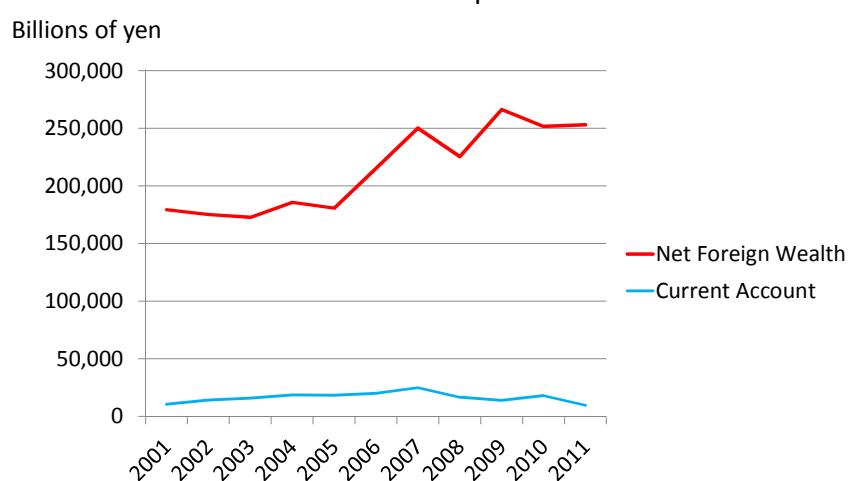
Current Account < 0 ↔ Financial Account ↔ Decrease in NIIP
 + Capital Account > 0

The country exports more assets than it imports,
 thus decreasing its NIIP.

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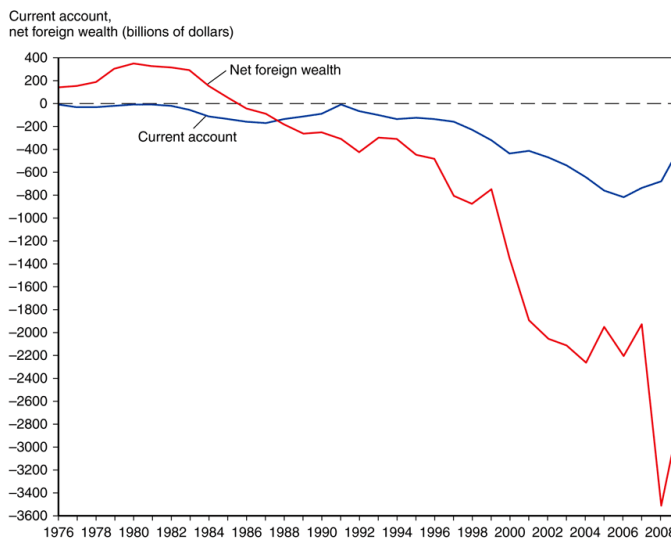
Japan's Current Account and NIIP

Bank of Japan



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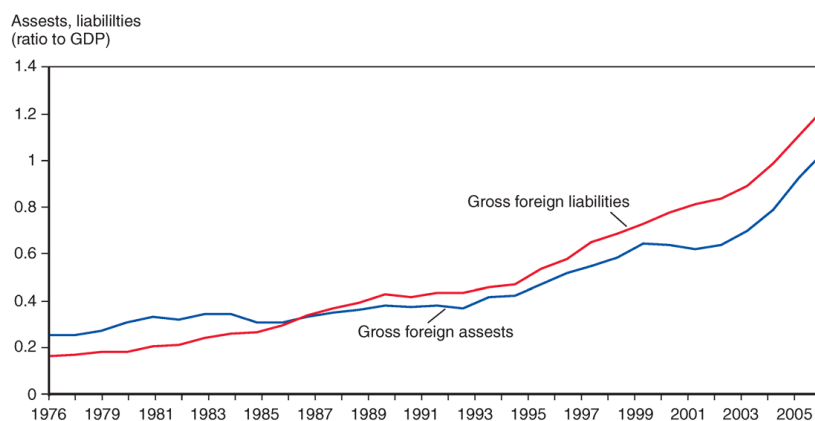
US Current Account and NIIP



From Krugman, Obstfeld, and Melitz (2011), p.332.

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US Gross Foreign Assets and Liabilities



From Krugman, Obstfeld, and Melitz (2011), p.345.

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Why Current Account relates to NIIP?

Suppose a country exports 100 cars, but imports only 80 cars.

The current account surplus of 20 cars is the value of lending to foreigners, which the country will be repaid in the future.

The equal change in net foreign wealth.

Do financial transactions affect NIIP in any way?

Suppose domestic residents buy a share of stock from foreigners by bank transfer. What happens to NIIP?

Financial transactions affect only “gross” foreign assets and liabilities with no change in “net” foreign assets.

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Official International Reserve Assets

Financial account also records the transactions of “official international reserve assets” by the central bank.

“Official international reserve assets” is foreign assets held by the central bank to cushion against instability in international markets.

“Official international reserve assets” includes foreign (mainly, US) government bonds, foreign (mainly, US) currency, gold and accounts at the IMF.

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Official Reserve Account / Changes in Reserve Assets

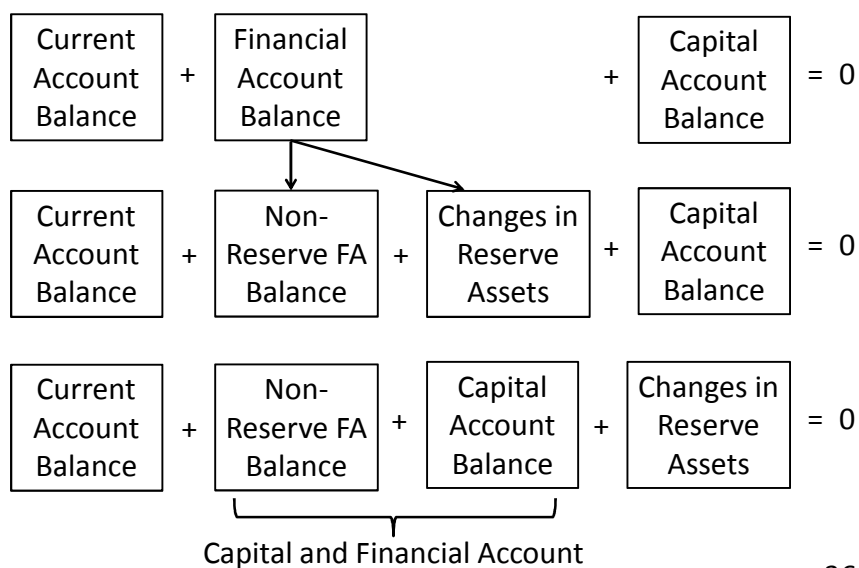
Financial Account

- Official Reserve Assets → Official Reserve Account
 - All Other Assets → Non-Reserve Portion of the FA
- ✓ Decreases in reserve assets by the domestic central bank are a credit (+).
- ✓ Increases in reserve assets by the domestic central bank are a debit (-).

Notice that official reserve account is **in deficit** when the central bank has increased the reserve assets.

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Fundamental Identity Again



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Japan's BOP for 2011

Ministry of Finance

(単位：億円,%)
(¥100 million,%)

項目	平成23年度 2011F.Y.	前年度 2010F.Y.	対前年度比増減 Changes from previous year	Item
貿易・サービス収支 (対前年度比)	- 53,020 (-)	52,225 (9.2)	- 105,246	Goods & Services (year-on-year changes)
貿易収支 (対前年度比)	- 34,495 (-)	64,955 (- 1.6)	- 99,450	Trade balance (year-on-year changes)
輸出 (対前年度比)	626,272 (- 2.8)	644,513 (16.0)	- 18,240	Exports (year-on-year changes)
輸入 (対前年度比)	660,767 (14.0)	579,557 (18.4)	81,210	Imports (year-on-year changes)
サービス収支	- 18,525	- 12,730	- 5,795	Services
所得収支	142,883	126,117	16,766	Income
経常移転収支	- 10,929	- 11,749	820	Current transfers
経常収支 (対前年度比)	78,934 (- 52.6)	166,593 (2.0)	- 87,659	Current Account (year-on-year changes)

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Japan's BOP for 2011 (cont.)

投資収支	75,819	- 92,416	168,235	Financial Account
直接投資	- 102,997	- 52,140	- 50,858	Direct investment
証券投資 (証券貸借取引を除く)	57,207 (54,780)	- 71,170 (- 79,656)	128,377 (134,436)	Portfolio investment (Excl. securities lending)
金融派生商品	14,045	6,701	7,345	Financial derivatives
その他投資 (証券貸借取引を除く)	107,564 (109,947)	24,193 (32,646)	83,371 (77,301)	Other investment (Excl. securities lending)
その他資本収支	2,468	- 4,804	7,272	Capital Account
資本収支	78,287	- 97,220	175,507	Capital & Financial Account
外貨準備増(-)減	- 114,939	- 52,035	- 62,904	Changes in Reserve Assets
誤差脱漏	- 42,282	- 17,337	- 24,945	Errors & Omissions

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