Balance of Payments - Concepts & Accounting

✄ Balance of Payments (a “flow” concept)
  » What does the BOP measure?
  » Accounting conventions
  » Important sub-categories of payments
    ◆ Current account
    ◆ Capital account
    ◆ Statistical discrepancy

✄ International Investment Position (a “stock” concept)
  » Debtor countries vs. creditor countries
  » The U.S. cycle from debtor to creditor, and then to debtor

✄ Interpreting the BOP and IIP
What does the BOP Measure?

✧ The Balance of Payments
  » Reflects the flow of “international transactions” over a period of time (quarter, year, decade)

✧ International transactions ⇒
  » Transactions between residents and non-residents
  » Citizenship is not a factor
  » Transactions with US embassies or military bases not covered
Categories of transactions

- Merchandise trade - e.g. aircraft, computers, wheat,..
- Services - e.g. travel and transport, royalties, licensing fees, income earning on foreign investments (a financial service)
- Unilateral transfers (gifts) - e.g. foreign aid payments, government pensions and welfare to non-residents, private gifts
- Private capital flows - e.g. financial securities (stocks and bonds), direct investment (>10% stake in foreign business)
- Official asset flows - e.g. gold, transactions with the IMF, transaction in other official reserve assets
Accounting Conventions

🔹 Every international transaction has two sides
  » a payment and a receipt
🔹 The BOP uses double-entry bookkeeping
  » CREDIT - a flow for which the country is paid
    ◆ Example 1: US exports $1 billion in wheat to Japanese buyer
    ◆ Example 2: US exports $100 million of IPO shares to Swiss buyer
  » DEBIT - a flow for which the country must pay
    ◆ Example 3: US imports $2 billion of aircraft from Brazil
    ◆ Example 4: US imports $500 million of bonds issued by Mexico
International Transactions in More Detail

Example 1: U.S. exports $1 billion of wheat to Japan, paid by writing a check against deposits in NY bank

<table>
<thead>
<tr>
<th>Credit(+)</th>
<th>Debit (-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merchandise export (wheat)</td>
<td>$1</td>
</tr>
<tr>
<td>Private capital outflow (reduction in bank’s liability to foreign residents)</td>
<td>$1</td>
</tr>
</tbody>
</table>

Example 2: U.S. exports $100 million of IPO shares to Swiss, paid by check against deposits in NY bank

<table>
<thead>
<tr>
<th>Credit(+)</th>
<th>Debit (-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital inflow (increase in liabilities to foreigners)</td>
<td>$100</td>
</tr>
<tr>
<td>Private capital outflow (reduction in bank’s liability to foreign residents)</td>
<td>$100</td>
</tr>
</tbody>
</table>
## International Transactions in More Detail

**Example 3:** U.S. imports $2 billion of aircraft from Brazil, paid by check against deposits in NY bank

<table>
<thead>
<tr>
<th>Credit(+)</th>
<th>Debit (-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merchandise imports (planes)</td>
<td>$2</td>
</tr>
<tr>
<td>Private capital inflow (increase in bank’s liability to foreign residents)</td>
<td>$2</td>
</tr>
</tbody>
</table>

**Example 4:** U.S. imports $500 million of bonds from Mexico, paid by check against deposits in NY bank

<table>
<thead>
<tr>
<th>Credit(+)</th>
<th>Debit (-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital outflow (increase in foreign asset holdings)</td>
<td>$500</td>
</tr>
<tr>
<td>Private capital inflow (increase in bank’s liability to foreign residents)</td>
<td>$500</td>
</tr>
</tbody>
</table>
Unilateral Transfers: A Special Case

- For unilateral transfers (gifts, aid, grants, pensions, ...) the offsetting entry is simply to the unilateral transfer account.
  - Example 5: US gives $10 million of medical supplies to victims of earthquake in Turkey
    - U.S. merchandise exports: +$10 million
    - Unilateral transfer: -$10 million
  - Example 6: US Social Security Administration sends monthly check to retired economist in Tahiti
    - Private capital inflow (increase in bank’s liability to foreign residents) + $2,000
    - Unilateral transfer: - $2,000
### U.S. International Transactions - 1998
(Source: Survey of Current Business, Table F-2, April 1999)

<table>
<thead>
<tr>
<th>Amounts in billions, numbers are rounded</th>
<th>Credit (+)</th>
<th>Debit (-)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exports of Goods and Services (1)</strong></td>
<td>$1,174</td>
<td></td>
</tr>
<tr>
<td>Merchandise exports (2)</td>
<td>671</td>
<td></td>
</tr>
<tr>
<td>Service exports (3)</td>
<td>503</td>
<td></td>
</tr>
<tr>
<td><strong>Imports of Goods and Services (15)</strong></td>
<td>-$1,365</td>
<td></td>
</tr>
<tr>
<td>Merchandise imports (16)</td>
<td>-919</td>
<td></td>
</tr>
<tr>
<td>Service imports (17)</td>
<td>-446</td>
<td></td>
</tr>
<tr>
<td><strong>Unilateral Transfers, net (29)</strong></td>
<td>-42</td>
<td></td>
</tr>
<tr>
<td><strong>Changes in US holdings of foreign assets (33) – (34)</strong></td>
<td>-298</td>
<td></td>
</tr>
<tr>
<td><strong>Changes in foreign holdings of U.S. assets (48)</strong></td>
<td>542</td>
<td></td>
</tr>
<tr>
<td><strong>Official international reserve transactions, net (34)</strong></td>
<td>-7</td>
<td></td>
</tr>
<tr>
<td><strong>Statistical discrepancy (64)</strong></td>
<td>-4</td>
<td></td>
</tr>
<tr>
<td><strong>Net balance of credits – debits</strong></td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>
### Five Key Balances in the U.S. BOP - 1998

<table>
<thead>
<tr>
<th>Balance Item (in $ billions)</th>
<th>Credit (+)</th>
<th>Debit (-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merchandise Trade Balance (2-16)</td>
<td></td>
<td>-248</td>
</tr>
<tr>
<td>Goods and Service Balance (1-15)</td>
<td></td>
<td>-169</td>
</tr>
<tr>
<td>Current Account Balance (1+15+29)</td>
<td></td>
<td>-233</td>
</tr>
<tr>
<td>Net Private Capital Flows + Statistical Discrepancy (33-34+48+64)</td>
<td>240</td>
<td></td>
</tr>
<tr>
<td>Overall Balance (-34)</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>
What is the Statistical Discrepancy?

- How are data on international transactions collected?
  - Government agencies use statistical sampling techniques
  - Some data based on 100% sample - e.g. imports on which tariffs are paid
  - Most data are based on less than 100% sample
  - Some international transactions are not reported and not included in the BOP
    - Illegal transactions - smuggling, drug trafficking
    - Various short-term capital flows - capital flight from countries in crisis, suitcase money, …

- If data recorded perfectly, then $\Sigma \text{Credits} = \Sigma \text{Debits}$
- Data are not perfect, so $\text{S.D.} \equiv - (\Sigma \text{Credits} - \Sigma \text{Debits})$
Macroeconomic Meaning of the Current Account Balance

- **Current Account (CA) = net foreign investment \((I_f)\)**
  - In equilibrium, Savings = Investment, or \(S = I_f + I_d\) so \(I_f = S - I_d\) ⇒ CA is national savings not invested at home

- **Recall certain national income identities**
  - \(Y = C + I_d + G + (X - M + U)\) [National Income]
  - \(E = C + I_d + G\) [National Expenditure]
  - \(Y - E = (X - M + U)\)
    ⇒ national income can exceed national expenditure by an amount equal to the current account

- **National Savings = Official Savings + Private Savings**
  ⇒ CA surplus = Fiscal Budget Surplus + Net Private Savings
CURRENT-ACCOUNT BALANCES Singapore will once again have the world’s largest current-account surplus this year, in relation to the size of its economy. According to the IMF’s latest *World Economic Outlook*, Singapore is expected to run a current-account surplus of 21% of GDP in 1999. Thailand (8.8% of GDP) and Malaysia (11.7%) will also have big surpluses this year, but in 2000 they are likely to shrink, to 5.9% and 5.1% respectively. As a result of rising oil prices and a lack of access to foreign capital, Russia’s current-account surplus has widened from 0.8% of GDP in 1998 to a probable 7.8% of GDP in 1999. At the other extreme, Poland, the fastest-growing economy in Eastern Europe, is expected to have a current-account deficit this year of 6.5% of GDP. Source: *The Economist*, 10/23/99.
Define

» Current Account (CA)
» Capital Account (KA) = balance on net private capital flows

Because of the double-entry nature of the balance of payments, if all international transactions are reported (S.D. = 0), then

$$CA + KA = B$$

where B = official settlements balance
Macroeconomic Meaning of the Overall Balance (2 of 2)

- Under pegged exchange rates, any imbalance between CA and KA must be financed by official reserve (OR) transactions, or
  \[ B + OR = 0 \]

- Under freely floating exchange rates, there is no need for the government to engage in any international transactions (OR=0). So all private transactions are voluntary and must find their own financing. In other words
  \[ B = 0, \text{ or } CA = KA \]

- Under floating exchange rates, whenever OR\(\neq 0\) ⇒ official intervention is occurring in the FX market
The International Investment Position

- The International Investment Position (IIP) measures the accumulated stock of foreign assets held by one country.
- IIP = the sum of all past current account balances
- IIP terminology
  - Debtor country: IIP < 0
  - Creditor country: IIP > 0
  - Sometimes refer to young debtor, mature creditor countries
- U.S. experience
  - Debtor country until early 20th century
  - Creditor country from 1920s until mid-1980s
  - Debtor country from mid-1980s till present day
## The International Investment Position of the U.S.

<table>
<thead>
<tr>
<th>Year</th>
<th>US Investments Abroad</th>
<th>Foreign Investments in the U.S.</th>
<th>U.S. Net Int’l Investment Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>1897</td>
<td>1.3</td>
<td>3.4</td>
<td>-2.1</td>
</tr>
<tr>
<td>1914</td>
<td>5.0</td>
<td>7.2</td>
<td>-2.2</td>
</tr>
<tr>
<td>1930</td>
<td>21.5</td>
<td>8.4</td>
<td>13.1</td>
</tr>
<tr>
<td>1946</td>
<td>9.4</td>
<td>15.9</td>
<td>23.5</td>
</tr>
<tr>
<td>1960</td>
<td>85.6</td>
<td>40.9</td>
<td>44.7</td>
</tr>
<tr>
<td>1982</td>
<td>958.8</td>
<td>693.8</td>
<td>265.0</td>
</tr>
<tr>
<td>1993</td>
<td>2,647.4</td>
<td>3,155.1</td>
<td>-507.7</td>
</tr>
<tr>
<td>1998</td>
<td>4,930.9</td>
<td>6,170.1</td>
<td>-1,239.2</td>
</tr>
</tbody>
</table>

Note: Figures in $Bn, direct invest at current cost.
Balance of Payments - Interpretation (1 of 2)

- Ex-post, the BOP always balances
  - Every transaction that takes place is financed somehow

- Ex-ante, the BOP need not balance
  - At prevailing prices, residents of one country may plan to spend more than residents of another country are willing to finance
  - ⇒ Something has to give: Exchange rates, prices of goods, interest rates, central bank reserves … change to bring balance
Balance of Payments - Interpretation (2 of 2)

- **BOP surplus/deficit, IIP creditor/debtor ≠ good/bad**
  - Need to probe deeper
- **Is deficit “sustainable”?**
  - Can it be paid off while allowing country to meet its policy objectives?
  - Is deficit temporary? (e.g. because of a drought, earthquake, or cyclical business downturn)
- **What is the source of the deficit?**
  - Borrowing for worthwhile private or public investment
  - Borrowing for wasteful investment or current consumption
- **We discuss these points over the rest of the semester**
Balance of Payments - Summary

- The BOP is a systematic record of transactions between residents and non-residents over a given time period.
- With international financial markets, people can borrow and lend with non-residents to enhance their consumption and investment opportunities.
- The current account measures the rate at which residents are accumulating foreign wealth.
- The international investment position measures the stock of foreign wealth held by residents.
- Both the CA and IIP vary over time, over the country’s life cycle, and are important ways to track the economic relationship of one country vis-à-vis the world.