Chapter Objective:

This chapter serves to introduce students to the balance of payments – how it is constructed, and how BOP data may be interpreted.

Chapter Three Outline

- Balance of Payments Accounting
- Specific Balance of Payments Accounts
  - Current Account
  - Capital Account
  - Official Reserves Account
  - Statistical Discrepancy
- Balance of Payments Identity
- BOP Trends in Major Countries
The Balance of Payments is the statistical record of a country’s international transactions over a certain period of time presented in the form of double-entry book-keeping.

N.B. when we talk about “a country’s balance of payments,” we are referring to the transactions of its citizens and government.

Transactions that lead to an increase in the supply of a country’s currency are recorded as debits in that country’s BOP.
- Examples: importing bicycles from abroad, purchasing foreign assets (financial assets, physical assets, etc.)

Transactions that lead to an increase in demand for a country’s currency are recorded as credits in that country’s BOP.
- Examples: exports of goods, services, sales of assets

Suppose that Maplewood Bicycle in Maplewood, Missouri, USA imports $100,000 worth of bicycle frames from Mercian Bicycles in Darby, England.

There will exist a $100,000 credit recorded by Mercian that “offsets” a $100,000 debit at Maplewood’s bank account.

This will lead to a rise in the supply of dollars and the demand for British pounds.
A. Balance of Payments Accounts

- The balance of payments accounts are those that record all transactions between the residents of a country and residents of all foreign nations.
- They comprise the following accounts:
  - Current Account (analogy: "Profits & Loss")
  - Capital Account (analogy: "Balance Sheet")
  - Official Reserves Account
  - Statistical Discrepancy

Balance of Payments Accounts

<table>
<thead>
<tr>
<th>Debits (recorded with a -)</th>
<th>Credits (recorded with a +)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CURRENT ACCOUNT</td>
<td></td>
</tr>
<tr>
<td>(a) Trade Balance</td>
<td></td>
</tr>
<tr>
<td>Transactions in goods, services, and transfers</td>
<td>Experts from the United States</td>
</tr>
<tr>
<td>Imports in the United States</td>
<td></td>
</tr>
<tr>
<td>Exports by the United States</td>
<td></td>
</tr>
<tr>
<td>(b) Investment Income Account</td>
<td>Receipt by the United States</td>
</tr>
<tr>
<td>Payment by the United States of dividends and interest</td>
<td>from foreigners</td>
</tr>
<tr>
<td>to foreigners</td>
<td></td>
</tr>
<tr>
<td>2. CAPITAL ACCOUNT</td>
<td></td>
</tr>
<tr>
<td>Increase in U.S. ownership of foreign assets</td>
<td>Capital inflows</td>
</tr>
<tr>
<td>Decrease in foreign ownership of U.S. assets</td>
<td>Increase in foreign ownership of U.S. assets</td>
</tr>
<tr>
<td>3. OFFICIAL RESERVES ACCOUNT</td>
<td></td>
</tr>
<tr>
<td>Increase in official reserves of the U.S. central bank</td>
<td>Decrease of official reserves of the U.S. central bank</td>
</tr>
<tr>
<td>Decrease in dollar reserves of foreign central banks</td>
<td>Increase in dollar reserves of foreign central banks</td>
</tr>
</tbody>
</table>

1. The Current Account (CA)

- Includes all imports/exports of goods & services.
  - Trade balance (civilian & military goods)
  - Invisibles balance (services)
  - Investment income balance
- Accounting
  - Exports of G&S are entered as credits
    - because they create cash inflows for the domestic country
  - Imports of G&S are entered as debits
    - because they lead to cash outflows from the domestic country
The Current Account (CA)

- Includes all imports/exports of goods & services
  - Trade, Invisibles, Factor income, Foreign aid
- Unilateral transfers of foreign aid
  - Debit (Idea: “import goodwill”)
  - Double-entry ⇒ what gets credited? G&S: CA; cash: KA
- If the debits exceed the credits, then BCA<0
  - i.e., the country is running a CA ("trade") deficit
- If the credits exceed the debits, then BCA>0
  - i.e., the country is running a CA ("trade") surplus

---

The Current Account (CA)

- Much lower deficit in 2009 than in 2008
  ⇒ Why?

---

2. The Capital Account (KA)

- The capital account records domestic residents’ sales of assets to foreigners and the same residents’ purchases of foreign assets
- Accounting
  - Asset sales to foreigners are entered as credits
    - “exporting” financial assets leads to cash inflows into the domestic (home) country
  - Purchases of foreign financial assets are entered as debits
    - “importing” financial assets is associated with cash outflows from the home country
The Capital Account (KA)

- The KA balance measures the gap between residents’ assets sales to foreigners and the same residents’ purchases of foreign assets.
- Details for 2010 (from Economic Report to the President)
  - Increase in foreign-owned assets in USA: $1,246bn
  - Increase in US privately-owned assets abroad: $1,005bn
  - See handout: 05b_US_BoP_erp_B103&B107 2012

The Capital Account (KA)

- The capital account is composed of
  - Foreign Direct Investment
    - FDI: control 10% or more;
  - Portfolio investments
    - stocks & bonds without control;
  - Other investments
    - trade credits, bank deposits, ...

The Current Account (CA)

- Much lower net flows in 2009 than in 2008
- Why?
Flows vs. Stocks: KA vs. NIIP

- Capital account (KA)
  - Is a flow measure
    - measures capital flows between a country and the rest of the world (ROW)
- Net international investment position (NIIP)
  - Is a stock measure
    - measures whether a country is a net creditor (e.g., China) or debtor (e.g., US) with respect to the ROW.

3. Statistical Discrepancy

- There are going to be some omissions and mis-recorded transactions—so we use a “plug” figure to get things to balance
- Exhibit 3.1 (three slides down) shows discrepancy of +$200bn in 2008, later adjusted to -$59bn
  - Discrepancy sometimes even larger
    - biggest « initial » discrepancies observed in ’91, ’98 & 2008-10
    - initial discrepancies are often revised in later years
      - 2000: initial estimate = plus $0.73bn, revised = minus $74bn
4. The Official Reserves Account

- Official-reserves assets include
  - **Gold**
    - used to make up most of a country’s reserves
    - as recently as the early 1980’s, still half of all reserves
    - now less than 1% of the total @ $35/1oz (9.8% @ mkt prices)
      - 12-08: 83% held by OECD countries (~19.6% @ market value)
  - Foreign currencies ($1.1tn held as of Q3-2013)
    - at end of 2013, made up 99% of non-gold official reserves
    - USD accounts for 61.4% of FX reserves; EUR: 24.1% (Q3 2013)
  - SDRs + Reserve Positions in the IMF
- OECD countries hold over a third of world reserves

ORA’s Flip Side

- **Foreign Holdings of U.S. Treasury Securities**
  (Dec. 2013, USD billion)

B. The Balance of Payments Identity

\[ \text{BCA} + \text{BKA} + \text{BRA} = 0 \]

where
- BCA = balance on current account
- BKA = balance on capital account
- BRA = balance on the reserves account

Under a pure flexible exchange rate regime,

\[ \text{BCA} + \text{BKA} = 0 \]
In 2006, the U.S. imported more than it exported, thus running a current account deficit of $811.3 billion.

During the same year, the U.S. attracted net investment of $826.9 billion—clearly, the rest of the world found the U.S. to be a good place to invest (why?)
### U.S. Balance of Payments Data 2006

<table>
<thead>
<tr>
<th>Current Account</th>
<th>Credits</th>
<th>Debits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Exports</td>
<td>$2,096.3</td>
<td></td>
</tr>
<tr>
<td>2 Imports</td>
<td></td>
<td>($2,818.0)</td>
</tr>
<tr>
<td>3 Unilateral Transfers</td>
<td>$24.4</td>
<td>($114.0)</td>
</tr>
<tr>
<td><strong>Balance on Current Account</strong></td>
<td></td>
<td>($811.3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capital Account</th>
<th>Credits</th>
<th>Debits</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Direct Investment</td>
<td>$180.6</td>
<td>($235.4)</td>
</tr>
<tr>
<td>5 Portfolio Investment</td>
<td>$1,017.4</td>
<td>($426.1)</td>
</tr>
<tr>
<td>6 Other Investments</td>
<td>$690.4</td>
<td>($400)</td>
</tr>
<tr>
<td><strong>Balance on Capital Account</strong></td>
<td></td>
<td>$826.9</td>
</tr>
<tr>
<td>7 Statistical Discrepancies</td>
<td></td>
<td>($18)</td>
</tr>
<tr>
<td><strong>Overall Balance</strong></td>
<td></td>
<td>($2.4)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Official Reserve Account</th>
<th>Credits</th>
<th>Debits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$2.4</td>
<td></td>
</tr>
</tbody>
</table>

**Credits**

<table>
<thead>
<tr>
<th>Debits</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2,096.3</td>
</tr>
<tr>
<td>($2,818.0)</td>
</tr>
<tr>
<td>$24.4</td>
</tr>
<tr>
<td>($114.0)</td>
</tr>
<tr>
<td>$811.3</td>
</tr>
<tr>
<td>$180.6</td>
</tr>
<tr>
<td>($235.4)</td>
</tr>
<tr>
<td>$1,017.4</td>
</tr>
<tr>
<td>($426.1)</td>
</tr>
<tr>
<td>$690.4</td>
</tr>
<tr>
<td>($400)</td>
</tr>
<tr>
<td>$826.9</td>
</tr>
<tr>
<td>($18)</td>
</tr>
<tr>
<td>($2.4)</td>
</tr>
<tr>
<td>$2.4</td>
</tr>
</tbody>
</table>

Under a pure flexible exchange rate regime, these numbers would balance each other out.

### In the real world, there is a statistical discrepancy; sometimes (as in here) but not very often, it is small

Including that, the balance of payments identity should hold:

\[
\text{BCA} + \text{BKA} = -\text{BRA}
\]

\[
($811.3) + $826.9 + ($18) = ($2.4)
\]
C. Balance of Payments and the Exchange Rate

<table>
<thead>
<tr>
<th>Current Account</th>
<th>Credits</th>
<th>Debits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Exports</td>
<td>$2,096.3</td>
<td></td>
</tr>
<tr>
<td>2. Imports</td>
<td>($2,818.0)</td>
<td></td>
</tr>
<tr>
<td>3. Unilateral Transfers</td>
<td>$244</td>
<td>($114.0)</td>
</tr>
<tr>
<td>Balance on Current Account</td>
<td>($811.3)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capital Account</th>
<th>Credits</th>
<th>Debits</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Direct Investment</td>
<td>$180.6</td>
<td>($255.4)</td>
</tr>
<tr>
<td>5. Portfolio Investment</td>
<td>$1,017.4</td>
<td>($626.1)</td>
</tr>
<tr>
<td>6. Other Investments</td>
<td>$699.4</td>
<td>($400)</td>
</tr>
<tr>
<td>Balance on Capital Account</td>
<td>$826.9</td>
<td></td>
</tr>
<tr>
<td>7. Statistical Discrepancies</td>
<td>($18)</td>
<td></td>
</tr>
<tr>
<td>Overall Balance</td>
<td>($826.9)</td>
<td></td>
</tr>
</tbody>
</table>

Official Reserve Account: $2.4

As U.S. citizens import, they are supply dollars to the FOREX market.

As U.S. citizens export, others demand dollars at the FOREX market.
### Balance of Payments and the Exchange Rate

<table>
<thead>
<tr>
<th>Account</th>
<th>Credits</th>
<th>Debits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Account</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Exports</td>
<td>$2,096.3</td>
<td></td>
</tr>
<tr>
<td>2 Imports</td>
<td>($2,818.0)</td>
<td></td>
</tr>
<tr>
<td>3 Unilateral Transfers</td>
<td>$24.4</td>
<td>($114.0)</td>
</tr>
<tr>
<td><strong>Balance on Current Account</strong></td>
<td>($811.3)</td>
<td></td>
</tr>
<tr>
<td><strong>Capital Account</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Direct Investment</td>
<td>$180.6</td>
<td>($235.4)</td>
</tr>
<tr>
<td>5 Portfolio Investment</td>
<td>$1,017.4</td>
<td>($426.1)</td>
</tr>
<tr>
<td>6 Other Investments</td>
<td>$695.4</td>
<td>($460)</td>
</tr>
<tr>
<td><strong>Balance on Capital Account</strong></td>
<td>$826.9</td>
<td></td>
</tr>
<tr>
<td><strong>Overall Balance</strong></td>
<td></td>
<td>($2.4)</td>
</tr>
</tbody>
</table>

As the U.S. gov’t buys dollars with FX, the supply of dollars decreases.

Consequently, the $ appreciates (its foreign-currency price rises).

### Sovereign Wealth Funds

- Government-controlled investment funds are playing an increasingly visible role in international investments.
- **SWFs (Sovereign Wealth Funds)**
  - Mostly domiciled in Asia and Middle-East
  - though Norway/Botswana/Russia all have large SWFs
  - Transparency? Motives?
  - Usually responsible for recycling these countries’ foreign exchange reserves (swelled by trade surpluses and commodity revenues)
D. Balance of Payments Trends

- Since 1982, the U.S. has had continuous current account deficits and surpluses on capital account.
  - Sole exception: small CA surplus in 1991 ($2.9bn).
  - Just how big did deficits grow?
    - 2000: $444.7bn (E&R 5; latest revised figure: $416.3bn)
    - 2004: $628bn (latest Economic Report to the President)
    - 2006: $800bn (based on 2013 ERP; highest ever)
    - 2012: $477bn (estimate based on 1st 3 quarters, 2013 ERP)
- During that period, Japan experienced reverse
  - 2011-3: US deficit stable (why?), Japan now has a CA deficit

U.S. Balance of Payments 1998-2012

U.S. BCA and BKA are almost mirror images

Japan Balance of Payments 1982-2006

Balance of Payments

Year

Source: IMF International Financial Statistics Yearbook, various issues

Balance of Payments Trends

- Germany traditionally had CA surpluses
- For a decade after 1991, Germany experienced CA deficits.
- This was largely due to German reunification
  - Need to absorb more output domestically to rebuild the former East Germany.
- What matters = nature / causes of disequilibrium
  - To wit, the CA has been back in the black since 2001

---

Balances on the Current (BCA) and Capital (BKA) Accounts of Germany

---

Balance of Payments Trends

- Asian countries have traditionally had current account surpluses
- Both China and Japan have tried to keep their currencies not too strong against the dollar.
- To do so, they have been buying dollars and selling their own currencies.
- The net result is a massive accumulation of FX (especially $) reserves by those nations’ central banks. *(but, is it the whole story? 05c_Asian FX reserves 0905)*
BOP Trends in Emerging Markets

- Latin America
  - CA>0 since 2002 (why?)
- Developing Asia
  - CA>0, KA>0 (why both?)
- Eastern Europe
  - CA<0, KA>0 (problem?)

References: IMF GFSR (2006-2013 issues)
**BOP and Fundamentals**

- National income or GNP is the sum of:
  \[ GNP = C + I + G + (X - M) \]
- GNP, alternatively, can be viewed as the sum of:
  \[ GNP = C + S + T \]
- So, it must be that:
  \[ 0 = (I - S) + (G - T) + (X - M), \text{ i.e.,} \]
  \[ BCA = X - M = (S - I) + (T - G) \]
How to eliminate a CA deficit?

- We know that BCA = X – M = (S - I) + (T - G)
- Increase private savings / reduce government deficit
- Import restrictions?
  - Quotas or tariffs? (Who gets the price increase? Does T go up?)
  - Unlikely to work anyways
    - shifts demand to non-restricted imports (why? + example: steel)
- Prevent foreigners from acquiring domestic assets?
- Manipulate the FX rate downward
  - J-curve problem (Why? demand / supply elasticities. USA ’08?)

Bottom Line: Why do we Care?

- Composition of trade
- Competitiveness
  - Implicit in the fact that BCA>0
  - Caveat: where is the causality?
    - U.S. BCA<0  ⇒  U.S. BKA>0
      - Need to get foreigners to finance the trade deficit
    - or U.S. BKA<0  ⇒  U.S. BCA<0?
      - Foreigners’ willingness to invest in the U.S. makes the dollar appreciate, which in turn reduces competitiveness?

An Aside – Capital Controls

- When they can make sense
  - Short-term flows can reverse very quickly
    - Evidence that these reversals are costly
    - Slowing contagion is helpful
  - Affect the split between long-term and short-term flows
    - Example: put restrictions on short-term flows
      - Chile: 30% deposit in escrow account
    - Examples of impact (see handouts): Brazil, China