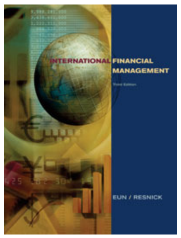
CHAPTER
FIVE



BALANCE OF PAYMENTS

CHAPTER FIVE OVERVIEW

- Components of the Balance of Payments (BOP)
- Composition of each component
- How are the BOP components affected
- Policy implications for managing BOP

BALANCE OF PAYMENTS ACCOUNTING PRINCIPLES

- Economic transactions between domestic and foreign residents.
- Viewpoint of one country (i.e. USA).
- Domestic assets and domestic liabilities are changed using debits and credits.

DESCRIPTION OF BALANCE OF PAYMENT ACCOUNTING

- Summarizes economic transaction between residents of one country and the rest of the world. Transactions include
  - Import and Export of goods and services
  - Transfers
  - Capital Flows…
- BOP account as an itemization of the factors behind the demand and supply of a currency
- Rules of Debits and Credits
  - Credits (+): Transactions that represent **demands for the local currency** in the foreign exchange market. Result from purchases by foreigners of goods, services, financial and real assets, gold and foreign exchange
    - Export of goods and services (sale
    - Receipt of gifts
    - Borrowing (sale of stocks, bonds etc
    - Investment by foreign residents (real estate, expansion of plant and equipment etc
    - Decrease in Official Reserve of gold/foreign currency

DESCRIPTION OF BALANCE OF PAYMENT ACCOUNTING

- Debits(-): Transactions that represent **supplies of local currency** in the foreign exchange market. Result from purchases by residents of goods, services, financial and real assets, gold, or foreign exchange from foreigners.
    - Import of goods and services
    - Gifts and Transfers
    - Lending (purchase of foreign stocks, bonds etc
    - Local investment in foreign countries
    - Increases in Official Reserve of gold/foreign currency
- Balance of Payment Categories
    - Current Account - flow of goods, services and transfers
    - Capital + Financial Accounts - public and private investments and lending
    - Errors and omissions
    - Official Reserves Account - changes in holdings of gold and foreign currencies

BALANCE OF PAYMENTS ACCOUNTING PRINCIPLES

- Double-entry accounting system.
    - If a transaction creates supply of the nation's currency in the foreign exchange market it is recorded as a **Debits (eg Imports)**
        - *Debits are used to increase assets and decrease liabilities.*
    - If a transaction creates demand for the nation's currency in the foreign exchange market it is recorded as a **Credit (eg Exports)**
        - *Credits are used to increase liabilities and decrease assets.*
    - Since the foreign exchange market clears (i.e. supply = demand): **DEBIT = CREDIT**

BALANCE OF PAYMENTS ACCOUNT COMPONETS

- **Current Account**
    - Merchandise
    - Services
    - Net income from investments
    - Unilateral transfers (Gifts and grants)
- **Capital Account**
    - Short term capital flows
    - Long term capital flows
- **Official Reserves Account**

DESCRIPTION OF BALANCE OF PAYMENT ACCOUNTING

A	Current Account Balance (**BC**)			
	Export of Goods	XX		
	Import of Goods	(XX)	XX	
	Export of Services	XX		
	Import of Services	(XX)	XX	Trade Balance
	Unilateral Transfers	(XX)		
			XX	Current Balance
B	Capital (including Financial) Accounts Balance (**BK**)			
	Direct Investment	XX		
	Portfolio Investment	XX		
	Short term Investments	XX	XX	
C	Errors and Omissions (**ε**)		XX	
			XX	Overall Balance
D	Changes in Official Reserves (**ΔR**)		XX	

BALANCE OF PAYMENT ACCOUNTING

The Balance of Payment Accounting Identity:

Assuming no errors and omissions,

$BC + BK + \Delta R = 0$

- Flexible exchange rate system
  - No change in Reserve
    - $BC + BK = 0 \Rightarrow BC = - BK$
    - correctly measured current account deficit/surplus equals correctly measured capital account surplus/deficit
    - current account deficit/surplus could be caused by capital account surplus/deficit
- Fixed Exchange Rate System
  - **$BC + BK + \Delta R = 0 \implies \Delta R = - (BC + BK)$**
  - increase/decrease in reserve equals the combined surplus or deficit.
- Implications of Imbalances in BOP
  - Long term deficits not sustainable

MERCHANDISE TRANSACTIONS

- **Largest component of** the Current Account**, It consists of:**
- **Exports: When US producers sell their products abroad,** buyers (foreigners) supply their own currencies and create a demand for dollars in the FX market
  - It is recorded as a **credit transaction (+)**
- **Imports: When US residents buy products from abroad,** they supply dollars (and create a demand for foreign currencies) in the FX market.
  - It is recorded as a debit transaction (-)
- **Merchandise Export - Merchandise Import: largely negative (for US)**
- **Examine US Merchandise Trade Balance Data**

SERVICE TRANSACTIONS

- Export and Import of Services
- Travel / Transportation / Financial / Insurance/ Computer & Information / Construction /Communication
- The net difference (export - import) for US is:
  - Service Exports Service Imports: Generally positive
  - Smaller then Merchandise Export – Imports
  - Has grown over the past years

OTHER CURRENT ACCOUNTS

- **Net Investment Income**
  - Income (interest, dividend, etc) received from US investment abroad *minus income paid to* foreigners investing in the US
  - Mostly increasing in recent years
- **Unilateral Transfers**
  - Net of gift received from and given to foreign countries
  - Mostly negative
- **Examine US Current Account Statistics**

CAPITAL ACCOUNTS

- Records changes in asset ownership of a country
  - Real asset (factories, building, land, etc)
  - Financial assets (securities: stocks, bonds, etc)
    - » Short term
    - » Long term

CAPITAL ACCOUNTS

- **Capital account transactions:**
  - Reflects the flow of capital in and out of the US
  - Affects the FX market:
- **Debit:**
  - Increase in US investments overseas
  - Decrease in overseas investments in the US
  - Capital Outflow from the US
  - It creates a supply of $ in FX market
- **Credit:**
  - Decrease in US investments overseas
  - Increase in overseas investments in the USI
  - Capital Inflow into the US
  - It creates a demand for $ in FX market

OFFICIAL RESERVE ACCOUNTS

- **Credit: Decrease in** US **Government's** holding of **FX and gold:** transactions by Fed or US Treasury
- **Debit: Increase in** US **Government's** holding of **FX and gold:** transactions by Fed or US Treasury
- Current Account Balance + Capital Account Balance + Official Reserve Account = 0
- Used to offset the net effects of the Current and Capital Account balances.

BALANCE OF PAYMENTS ACCOUNTING ENTRIES: A SUMMARY

ACCOUNT	CREDITS	DEBITS
Merchandise	**A.** Export goods	**B.** Import goods
Service	**C.** Export service	**D.** Import service
Net Investment Income	**E.** Income from Foreign Investments	**F.** Income paid to Foreign Investments
Unilateral Transfers	**G.** Transfer to US from Overseas	**H.** Transfer to Overseas from US
Capital Flows	**I.** Increase in Foreign Investments in US/Decrease in Foreign Investments overseas	**J.** Decrease in Foreign Investments in US/Increase in Foreign Investments overseas
Official Reserve	**K.** Decrease in Official Holding of FX & Gold	**L.** Increase in Official Holding of FX & Gold

BALANCE OF PAYMENTS ACCOUNTING ENTRIES: A SUMMARY

- Balance of Trade (BOT) = (A - B) + (C-D)
- Current Account Balance = (A-B) + (C-D) + (E-F) + (G-H)
- Capital Account Balance = (I-J)
- Official Reserve Balance = (K-L)
- Current Account + Capital Account + Official Reserve = 0

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INFLATION & BALANCE OF TRADING - BOT

- If domestic inflation / price levels **increase:**
  - Export will decrease
  - Imports will increase
    - **BOT will decrease**
- If domestic inflation / price levels **decrease:**
  - Export will increase
  - Imports will decrease
    - **BOT will increase**

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NATIONAL INCOME (GNP) & BALANCE OF TRADING - BOT

- If national income / prosperity **increases:**
  - Imports will increase more than exports:
  - **BOT will decrease:**
- If national income / prosperity **decreases:**
  - Imports will decrease more than exports:
  - **BOT will increase:**

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PRICE OF DOLLAR & BOT

- If the price of $ **increases:**
  - Export will decrease:
  - Imports will increase:
  - **BOT will decrease**
- If the price of $ **decreases:**
  - Export will increase:
  - Imports will decrease:
  - BOT **will increase**

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PRICE OF DOLLAR & BOT

- **If Export > Import: BOT surplus**
  - Excess Demand for $ in the FX market
  - Price of $ may increase
- **If Export < Import: BOT deficit**
  - Excess supply for $ in the FX market
  - Price of may decrease

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GOVERNMENT POLICY & BOT

- Methods used by governments to reduce BOT deficit:
  - Currency depreciation
  - Protectionism
    - Quotas
    - Tariffs
  - Regulating flow of international capital

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FEEDBACK LOOP IN THE BOT

- **BOT deficit** (decreases) in the US : Imports > Exports
  - Excess supply of $ in the FX market
  - Price of $ will decline
  - Export will increase and Imports will decrease
  - BOT will increase
- **BOT surplus** (increases) in the US : Imports < Exports
  - Excess demand for $ in the FX market
  - Price of $ will increase
  - Export will decrease and Imports will increase
  - BOT will decrease

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PRICE OF DOLLAR & BOT: ANOTHER LOOK

- Reasons why decline in $ prices will not always correct the BOT deficit:
  1. Capital flows into the US.
  2. The producer of the import may respond by lowering price of their product.
  3. The price of a currency does not change uniformly with all currencies
  4. The J - Curve effect

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BOP & ECONOMIC FUNDAMENTALS

National Income = Consumption + Savings (1)

National Spending = Consumption + Investment (2)

National Income - National Spending = Savings - Investment (3)

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BOP & ECONOMIC FUNDAMENTALS

National Income – Domestic spending = Export (1)

National Spending – Domestic spending = Import (2)

National Income - National Spending = Export - Import (3)

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BOP & ECONOMIC FUNDAMENTALS

Saving – Investment = Export - Import (1)

Capital Account Flows = Current Account Flows (2)

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PROBLEM SET #1: LIST OF TRANSACTIONS

a. Payment of $20 million in Social Security to US citizens living in Costa Rica
b. Sale overseas of Elvis Presley CDs valued at $15 million.
c. Tuition receipts of $30 million by American universities from foreign students.
d. Payment of $8 million consulting fees to Arthur Andersen by a Mexican firm
e. Sale of a $100 million Eurobond issue in London by IBM.
f. Payment of $10 million in interest by IBM to its Eurobond investors in London
g. Purchase by TI of memory chips valued at $60 million from Toshiba, in Japan.
h. Purchase of $25 million in East European stocks by Fidelity Investments (USA).
i. Fidelity receives $5 million in dividends from its East European stock investment
j. US Federal Reserve sells $20 million of Japanese bonds
k. US Federal Reserve buys $30 million of Japanese yen

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PROBLEM SET #2: LIST OF TRANSACTIONS

1. Purchase of $35 million in Japanese bonds by Vangaurd (USA).
2. A $25 million US aid to Bosnia
3. $45 million sales by All State Insurance in France
4. Purchase by HP of components valued at $65 million from Hyndai, in Korea.
5. Payment of $10 million in dividends by GE to its investors in Frankfurt
6. A $120 million stock issue in Frankfurt by GE
7. Purchase of $50 million French Francs by the US Federal Reserve
8. Purchase of $60 million in Japanese Govt Bonds by the US Federal Reserve
9. Foreign tourists spending $15 million in New Orleans
10. Sale of Star Wars DVD, valued at $55 million, in China

PROBLEM SET #3: LIST OF TRANSACTIONS

A. Payment of $20 million in Social Security to US citizens living in Costa Rica
B. Sale overseas of Elvis Presley CDs valued at $15 million.
C. Tuition receipts of $30 million received by US universities from foreign students.
D. Payment of $8 million consulting fees to Arthur Andersen by a Mexican firm
E. Purchase of $ 32 million of British Pounds by the US Federal Reserve
F. Purchase of $ 6 million of British government bonds by the US Federal Reserve
G. Sale of a $100 million Eurobond issue in London by IBM.
H. Payment of $10 million in interest by IBM to its Eurobond investors in London
I. Sale of $8 in gold by the US Federal Reserve
J. Purchase by TI of memory chips valued at $60 million from Toshiba, in Japan.
K. Purchase of $25 million in East European stocks by Fidelity Investments (USA).

ECONOMIC EFFECTS OF BALANCE OF PAYMENT CHANGES: A SUMMARY

	US exports to foreign country	Foreign imports from US	US imports from foreign country	Foreign exports to US	US BOT with foreign country	US trade deficit with foreign country
US inflation is **higher** than foreign inflation						
US inflation is **lower** than foreign inflation						
US GNP **increasing,** foreign GNP constant						
US GNP **decreasing,** foreign GNP constant						
US dollar **appreciates** / foreign currency **depreciates**						
US dollar **depreciates** / foreign currency **appreciates**						
US Govt **increases tariffs** on foreign goods						
US Govt **decreases tariffs** on foreign goods						
Foreign Govt **increases tariffs** on US						
Foreign Govt **decreases tariffs** on US						
US Govt **increases quotas** on foreign goods						
US Govt **decreases quotas** on foreign goods						
Foreign Govt **increases quotas** on US						
Foreign Govt **decreases quotas** on US						

	US export	US import	US dollar	Foreign currency
US **BOT increases** = US **trade deficit decreases**				
US **BOT** decreases = US **trade deficit increases**				