

# Lecture 2: National Income Accounting and Balance of Payments

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Course: International Macroeconomics

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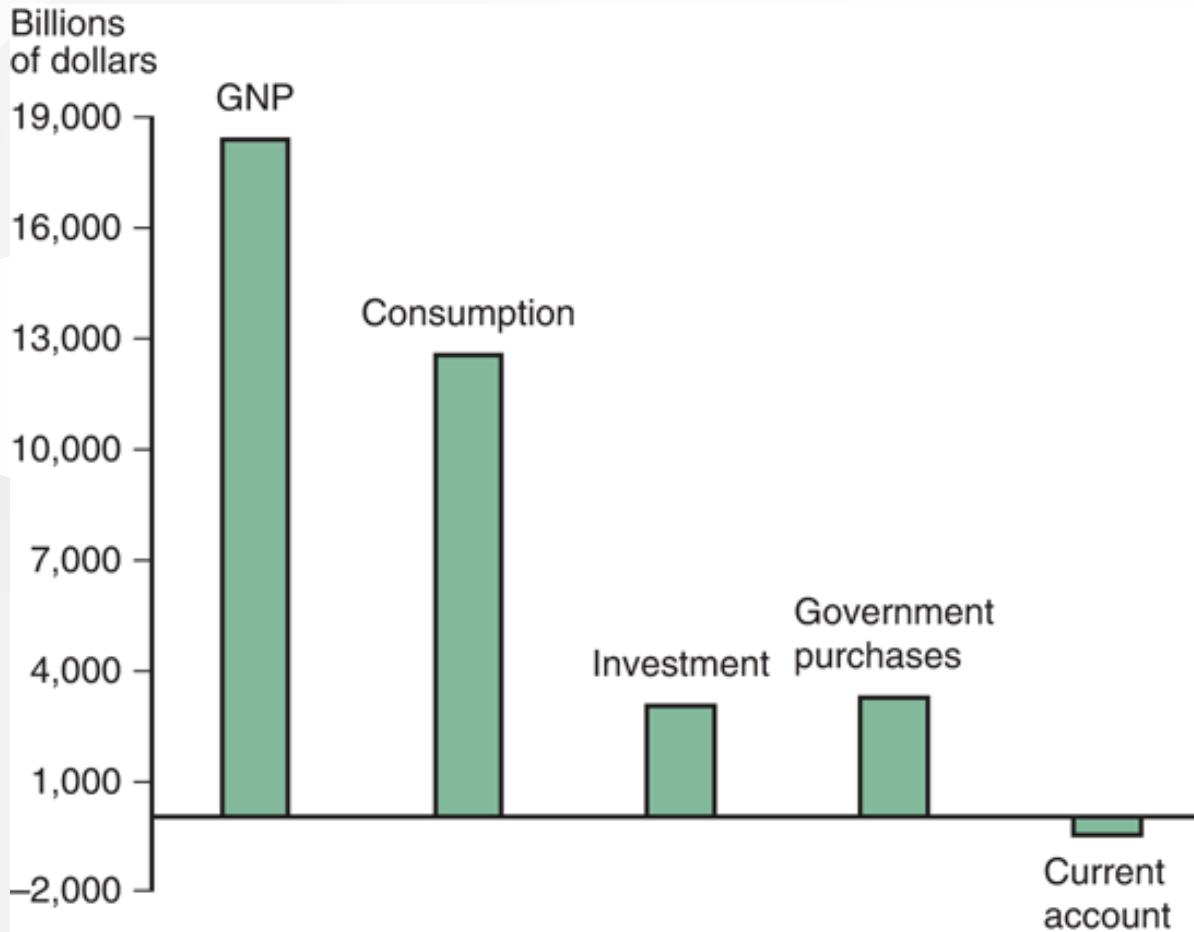
## What Is National Income Accounting?

- A classification of transactions that contribute to national income according to types of expenditure
  - consumption (C): expenditure by consumers
  - investment (I): expenditure by firms
  - government purchases (G): expenditure by gov't, not including transfer payments
  - current account balance (CA): net expenditure by foreigners, exports (EX) – imports (IM)
- An important identity
  - national income = expenditure = production

## Measuring National Income

- Value of all final goods and services in a given period
  - gross national product (GNP): produced by a nation's factors of production, e.g. labor & capital (our focus)
  - gross domestic product (GDP): produced within a country's borders
- GNP & GDP are approximate measures, but not precise
- A more precise measure
  - net national product (NNP) = GNP – depreciation
  - national income = NNP + net unilateral transfers

## U.S. GNP



- 2016:Q1, Billions of dollars (source: BEA)
- Consumption is largest component of U.S. GNP

## The Road Ahead

1. National Income Accounting
2. Balance of Payments

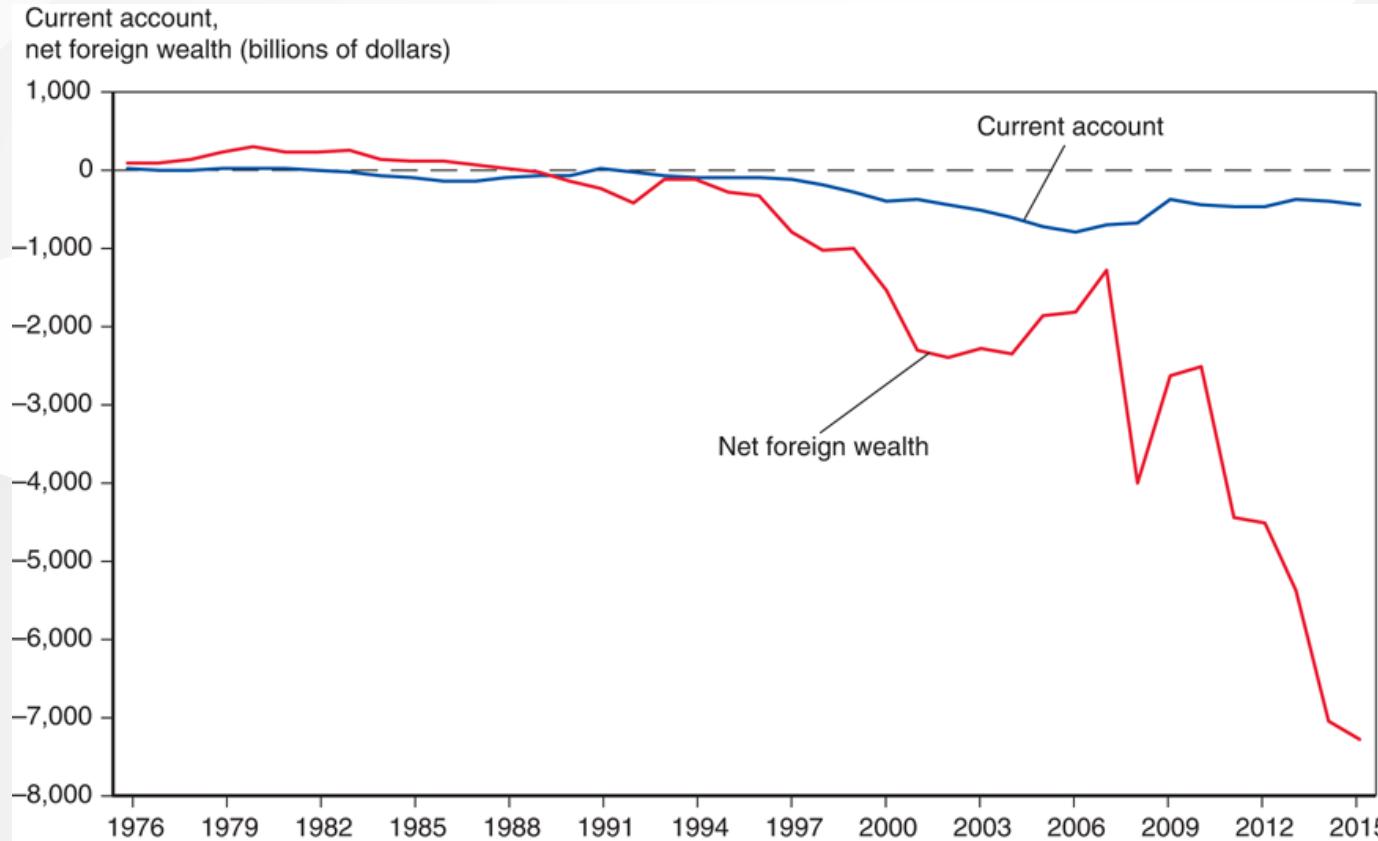
# National Income Accounting

## National income identity

$$\begin{aligned} \underbrace{Y}_{\text{GNP}} &= \underbrace{C + I + G}_{\text{domestic expenditure}} + \underbrace{EX - IM}_{\text{net foreign expenditure}} \\ \Rightarrow \quad \underbrace{EX - IM}_{\text{current account (CA)}} &= Y - (C + I + G) \end{aligned}$$

- When production  $>$  ( $<$ ) domestic expenditure
  - surplus (deficit):  $CA > (<) 0 \Leftrightarrow EX > (<) IM$
  - lending (borrowing)  $\Rightarrow$  net foreign wealth  $\uparrow (\downarrow)$
- International lending/borrowing  $\Rightarrow$  *intertemporal* trade

## U.S. Current Account, 1976-2015



- CA & net foreign wealth (or net international investment position), billions of dollars (source: BEA)
- Sustained CA deficits since early 1980s added up to large foreign debt

# Saving and Current Account

## National income identity

$$\underbrace{S}_{\text{national saving}} = \underbrace{Y - T - C}_{\text{private saving}} + \underbrace{T - G}_{\text{gov't saving}} = \underbrace{I + CA}_{\text{total investment}}$$

- Some notations
  - $Y - T$  = disposable income,  $T$  = taxes net of transfers
  - $S^p$  = private saving,  $S^g$  = gov't saving
  - $G - T$  = primary deficit/newly issued gov't debt
- Ways to raise national wealth
  - Closed economy: only accumulate capital ( $S = I$ )
  - Open economy: also net foreign investment ( $CA$ )
- Borrow ( $CA < 0$ ) to invest more ( $I > S$ )

## Balance of Payments

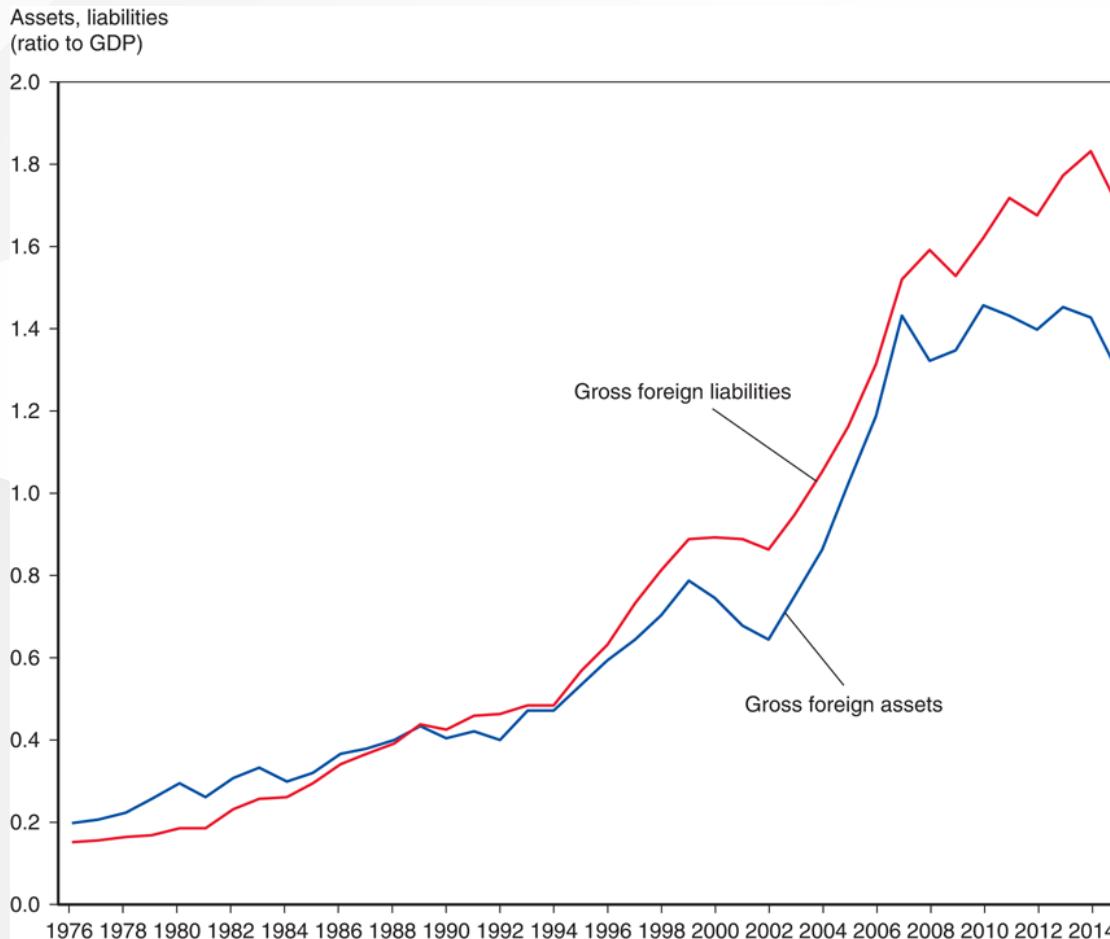
- A set of accounts recording a country's receipts (credit) from and payments (debit) to foreigners
  - current account = exports – imports + net unilateral transfers of goods and services
  - financial account = sales (exports) of domestic assets to foreigners – domestic purchases (imports) of foreign assets
  - capital account: special transfers of assets (small in quantity), e.g. debt forgiveness, migrants' transfers
- Principle of double-entry bookkeeping
  - each transaction enters accounts twice, once as credit (+) and once as debit (-)
  - $\text{current acc't} + \text{capital acc't} = - \text{financial acc't}$

# U.S. Balance of Payments, 2015

<b>A. Current Account [(1)-(2)+(3)]</b>	<b>-462.97</b>
(1) Exports	3,044.08
Goods	1,510.30
Services	750.86
Income receipts (primary income)	782.92
(2) Imports	3,362.06
Goods	2,272.87
Services	488.66
Income payments (primary income)	600.53
(3) Net unilateral transfers (secondary income)	-144.99
<b>B. Financial Account [(1)-(2)+(3)]</b>	<b>195.23</b>
(1) Net U.S. incurrence of liabilities, excl. financial derivatives	395.23
Official reserve assets	-98.10
Other assets	493.33
(2) Net U.S. acquisition of financial assets, excl. financial derivatives	225.40
Official reserve assets	-6.29
Other assets	231.69
(3) Financial derivatives, net	25.39
<b>C. Capital Account</b>	<b>-0.04</b>
<b>Statistical Discrepancy [-(A + B + C)]</b>	<b>267.78</b>

Source: U.S. Department of Commerce, BEA, June 16, 2016, release (billions of dollars).

## U.S. Gross Foreign Assets & Liabilities



- Ratio to GDP, 1976–2015 (source: BEA)
- U.S. is world's largest debtor nation

## Double-entry Bookkeeping: Example 1

	Credit	Debit
Current account, U.S. goods import		\$1,000
(Fax machine purchase)		
Financial account, U.S. asset sale	\$1,000	
(Sale of bank deposit)		

- We purchase a fax machine from Italian company Olivetti
- Olivetti deposits our check in a U.S. bank

## Double-entry Bookkeeping: Example 2

	Credit	Debit
Current account, U.S. service import  (Meal purchase)		\$200
Financial account, U.S. asset sale  (Sale of credit card claim)	\$200	

- We buy lunch in France and pay by credit card issued by American bank

## Double-entry Bookkeeping: Example 3

	Credit	Debit
Financial account, U.S. asset purchase		\$95
(Stock purchase)		
Financial account, U.S. asset sale		\$95
(Sale of bank deposit)		

- We purchase a share of British Petroleum (BP) stock
- BP deposits money in a U.S. bank

## Double-entry Bookkeeping: Example 4

	Credit	Debit
Financial account, U.S. asset purchase  (Stock purchase)		\$80
Financial account, U.S. asset purchase  (Reduction in foreign check claim)	\$80	

- We purchase a share of German stock and pay by check on Swiss bank account

## Double-entry Bookkeeping: Example 5

	Credit	Debit
Financial account, U.S. asset sale		\$1,000
(Reduction in sale of dollars)		
Current account, U.S. goods export	\$1,000	
(Goods sale)		

- Foreign exchange intervention: Korean government uses dollars in American bank account to buy Korean currency from its citizens
- Korean citizens use dollars to buy American goods

## Double-entry Bookkeeping: Example 6

	Credit	Debit
Capital account, U.S. transfer payment  (Debt forgiveness)		\$5,000
Financial account, U.S. asset purchase  (Reduction in foreign assets holding)	\$5,000	

- U.S. bank forgives debt owed by Argentina government through debt restructuring

## Readings & Exercises

- Readings
  - KOM: chapter 13
- Exercises
  - KOM: problem 1, 2, 3, 4