

Lecture 2: National Income Accounting and Balance of Payments

Instructor: Fei Tan

 @econdojo  @BusinessSchool101  Saint Louis University

Course: International Macroeconomics

Date: January 8, 2026

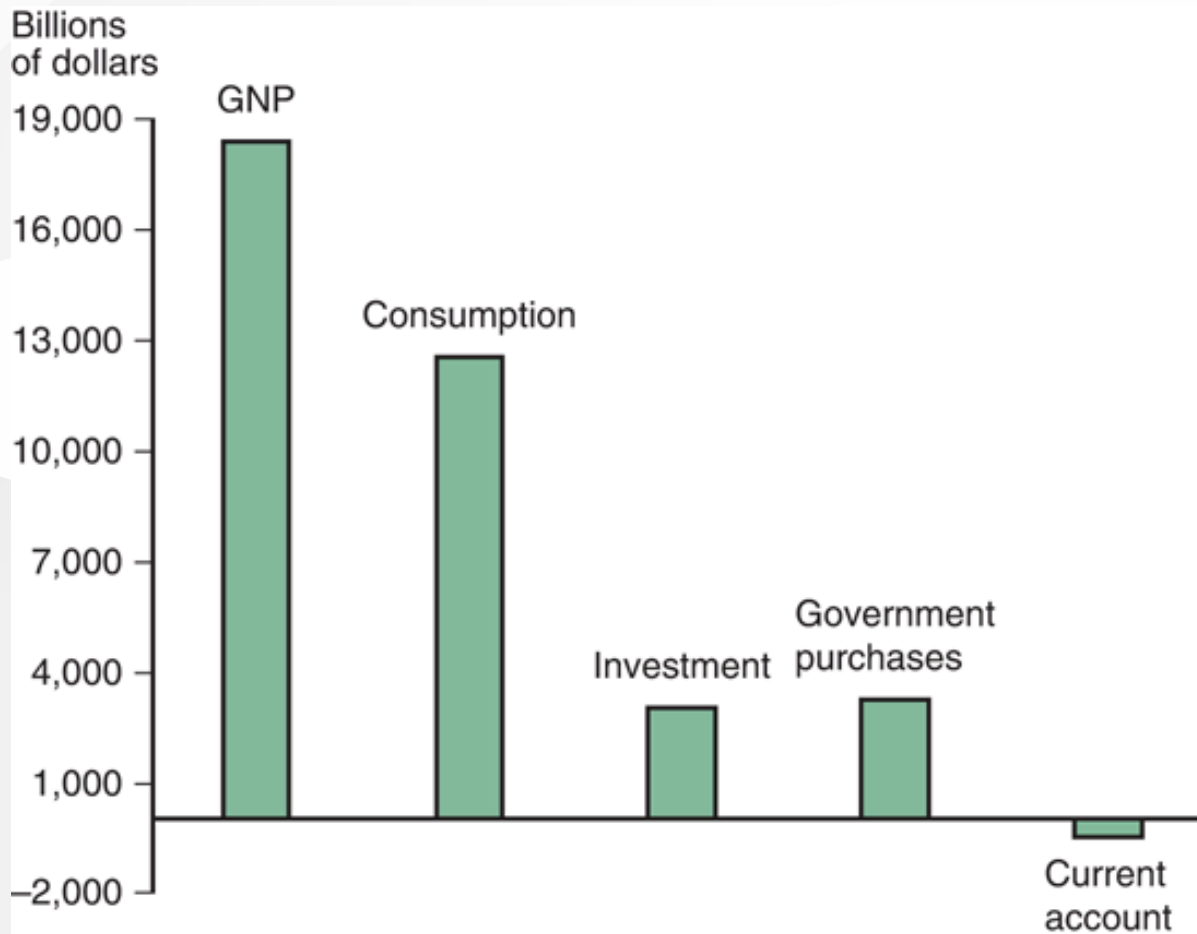
What Is National Income Accounting?

- 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) = $\text{GNP} - \text{depreciation}$
 - national income = $\text{NNP} + \text{net unilateral transfers}$

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

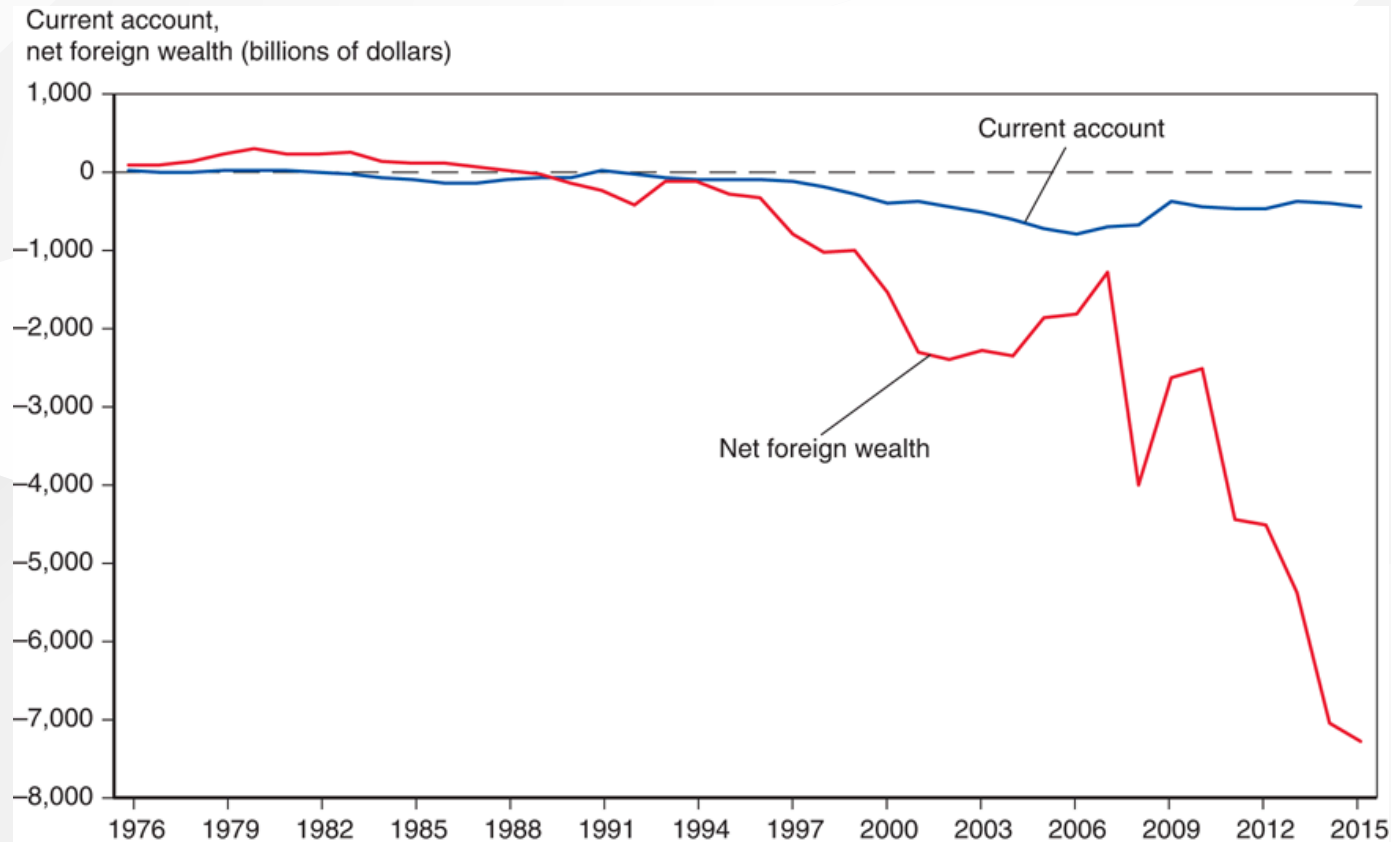
National Income Accounting

National income identity

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

- 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

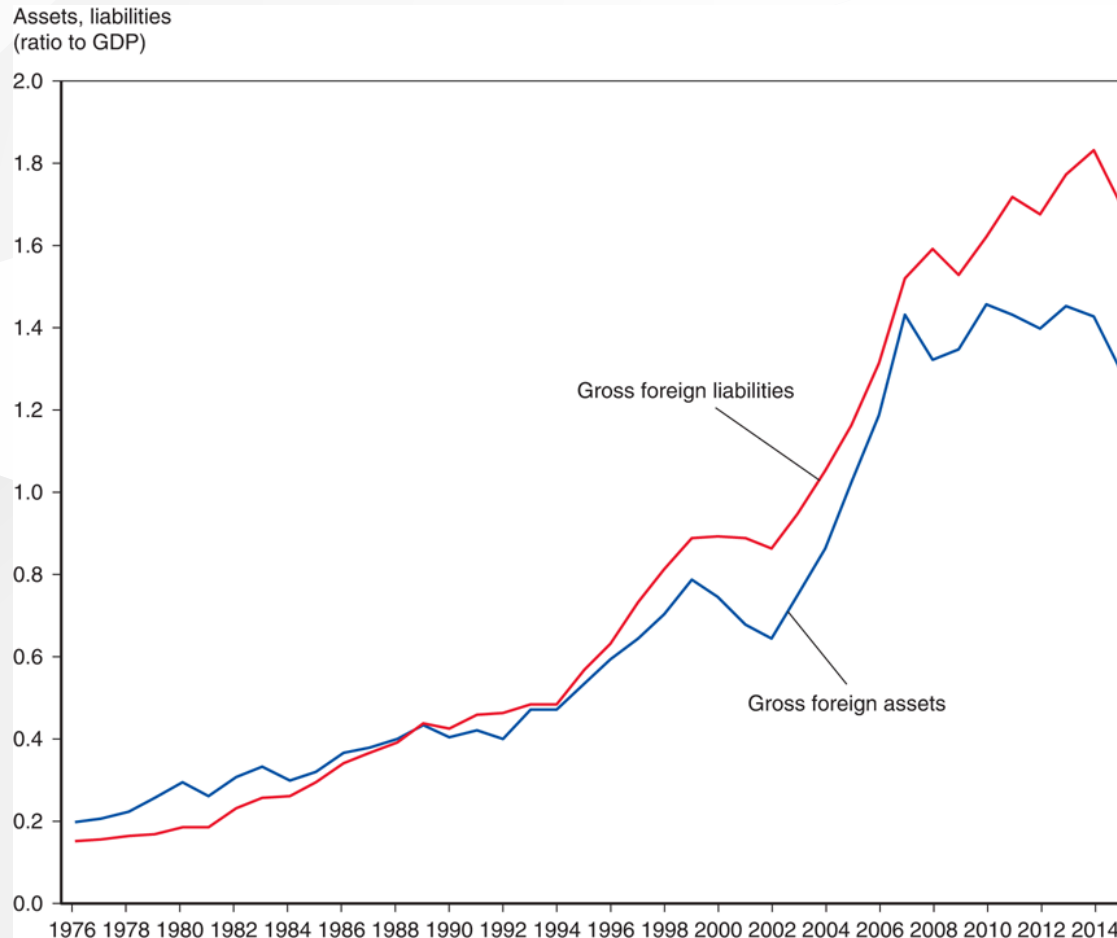
- A set of accounts recording a country's receipts (credit) from and payments (debit) to foreigners
 - $\text{current account} = \text{exports} - \text{imports} + \text{net unilateral transfers of goods and services}$
 - $\text{financial account} = \text{sales (exports) of domestic assets to foreigners} - \text{domestic purchases (imports) of foreign assets}$
 - 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

A. Current Account [(1)-(2)+(3)]	-462.97
(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. Financial Account [(1)-(2)+(3)]	195.23
(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
C. Capital Account	-0.04
Statistical Discrepancy [-(A + B + C)]	267.78

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

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

- 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		\$5,000
(Debt forgiveness)		
Financial account, U.S. asset purchase	\$5,000	
(Reduction in foreign assets holding)		

- 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