Topics for Today

1. Coordinated Fixed Ex. Rate Systems
   - The (N-1) Problem
   - Commodity Standards
   - Reserve Currency Standards

2. Evolution of the International Monetary System
   - The Gold Standard
   - Inter-war Instability
   - The Bretton Woods System

3. The Open Economy Trilemma

4. Macroeconomic Policy Goals in Open-Economies
   - Internal & External Balance

Coordinated Fixed Ex. Rate Systems

(N-1) Problem: With N countries and currencies, there are only N-1 independent ex. rates.

$\Longrightarrow$ To achieve a system of fixed ex. rates, only N-1 countries need to intervene. Who gets a free ride?

Ways to Resolve the Indeterminacy

1.) Have everyone peg their currencies to something else, e.g., gold. Commodity Standards

$$\$/¥ \equiv \frac{\$}{\text{Gold}} \div \frac{¥}{\text{Gold}}$$

2.) Have everyone (except one) peg to the same currency. The currency you peg to is called the "reserve currency"

3.) Hybrid. Peg to a reserve currency, and then peg the reserve currency to a commodity.

There have been 4 broad phases in the evolution of the international financial system:

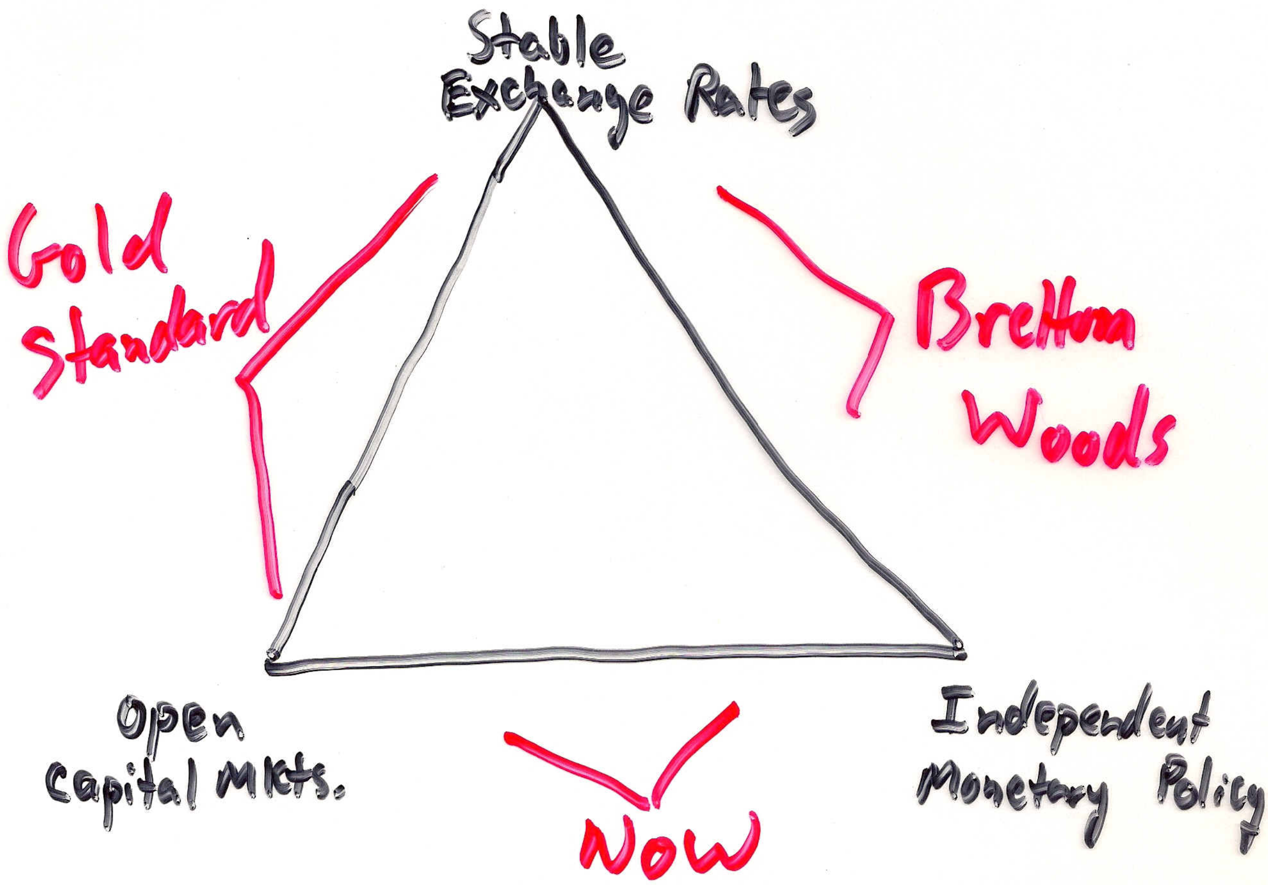
1.) Gold Standard → 1870 - 1914

2.) Inter-War Instability → 1918 - 1939
Failed attempts to restore Gold Standard

3.) Bretton Woods → 1944 - 1973

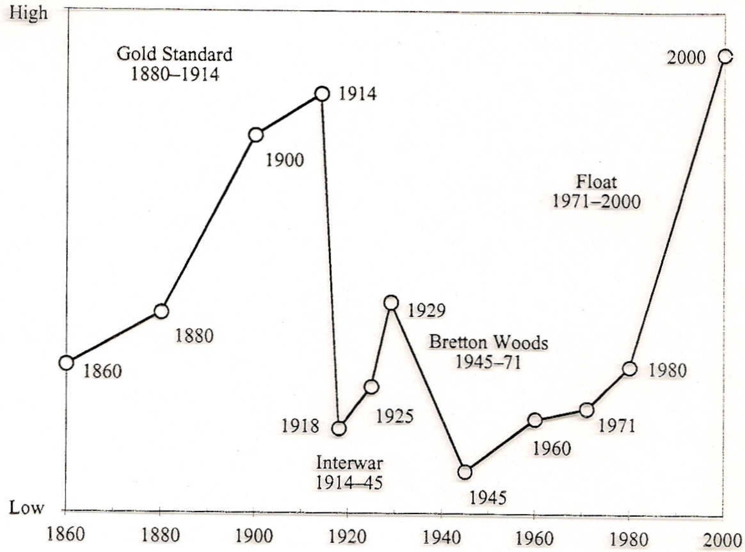
4.) Managed Floating → 1973 - Present

Policy Trilemma



We know from Chpt. 17 that you can only have 2 of the 3.

Figure 1: Conjecture? A Stylized View of Capital Mobility in Modern History



Source: Introspection.

Table 1: The Trilemma and Major Phases of Capital Mobility

	Resolution of trilemma – Countries choose to sacrifice:			
Era	Activist policies	Capital mobility	Fixed exchange rate	Notes
Gold standard	Most	Few	Few	Broad consensus.
Interwar (when off gold)	Few	Several	Most	Capital controls especially in Central Europe, Latin America.
Bretton Woods	Few	Most	Few	Broad consensus.
Float	Few	Few	Many	Some consensus; except currency boards, dollarization, etc.

Achieving Internal + External Balance with Fixed Exchange Rates

Remember, with fixed rates, monetary policy is endogenous. Instead the exchange rate itself becomes an object of policy.

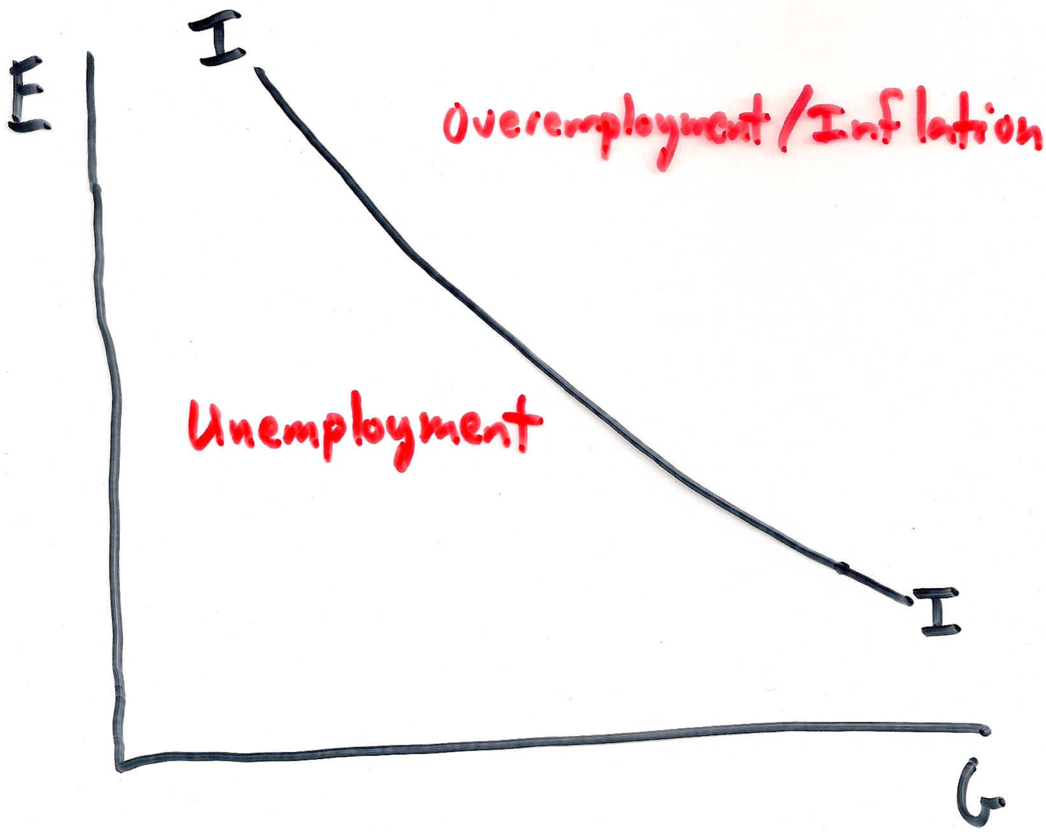
Internal Balance: What combos of (G, T) and E cause $Y = Y^f$?

$$Y^f = C(Y^f - T) + I + G + CA\left(\frac{EP^*}{P}, Y^f - T\right)$$

$Y^f =$ full-employment output

Since $G\uparrow$ and $E\uparrow$ both cause $AD\uparrow$ (and $Y\uparrow$), to maintain internal balance we must have $G\uparrow \Rightarrow E\downarrow$

Internal Balance



External Balance : What combos of (G, T) and E cause $CA = X$?

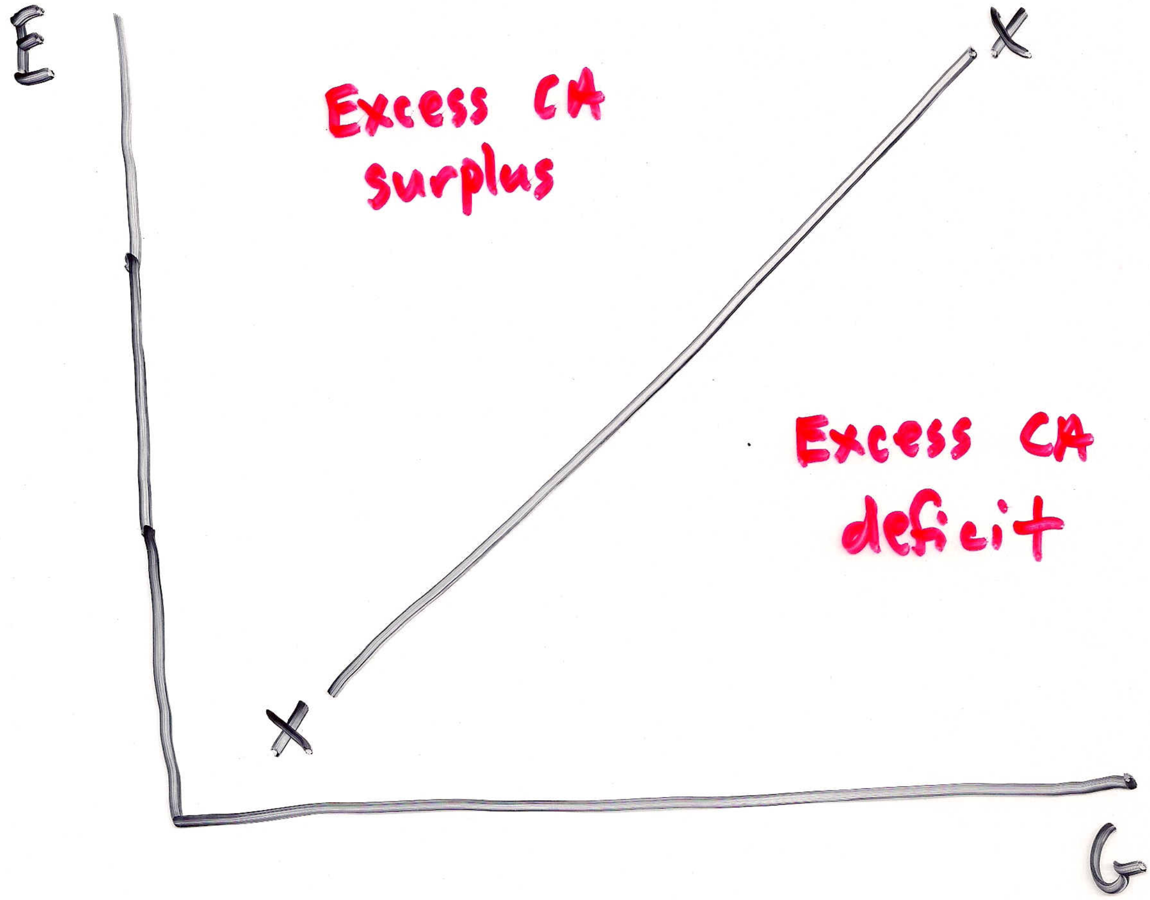
target current acct.

$$CA\left(\frac{EP^*}{P}, Y(G) - T\right) = X$$

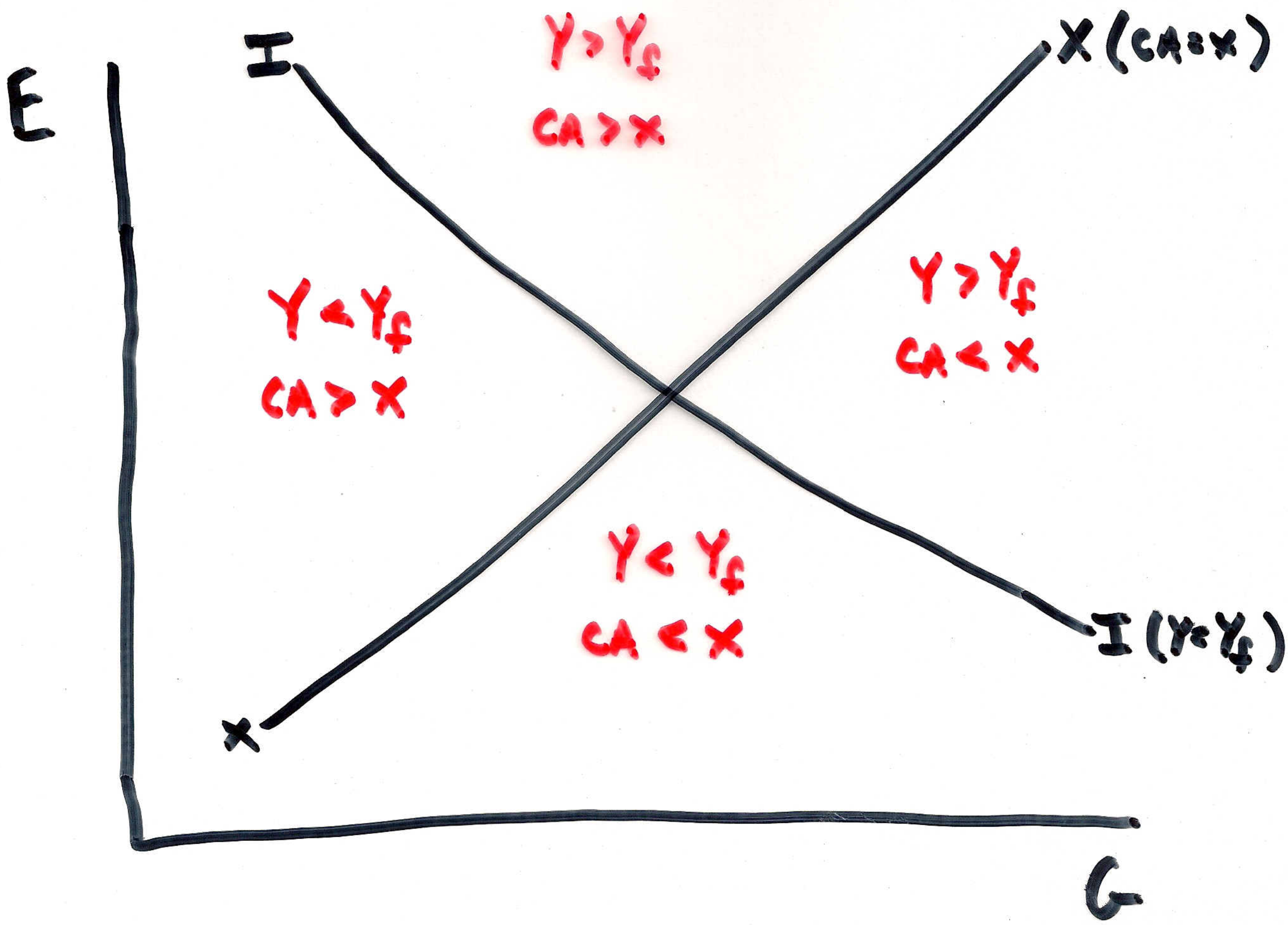
Note, $E\uparrow \Rightarrow CA\uparrow$ (Marshall-Lerner)

$$G\uparrow \Rightarrow Y\uparrow$$
$$\Rightarrow IM\uparrow$$
$$\Rightarrow CA\downarrow$$

Therefore, to maintain external balance we must have $E\uparrow \Rightarrow G\uparrow$

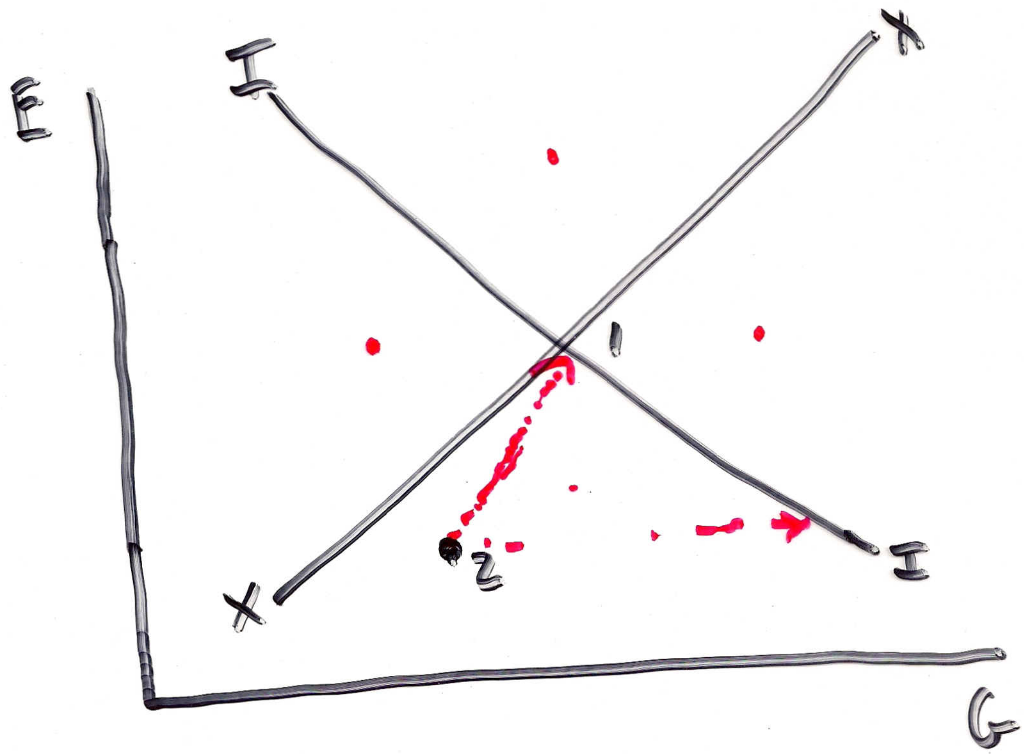

E
Excess CA surplus
Excess CA deficit
G

Internal and External Balance



Policy Dilemmas

In general, you need to change both E (expenditure-switching policy) and G (expenditure-changing policy) to achieve both internal + external balance.



Note the dilemma at pt. 2.

1.) Fiscal expansion restores internal balance but exacerbates external imbalance

2.) Fiscal contraction restores external balance but exacerbates internal imbalance.

$\Longrightarrow$ Need to devalue!