Outline

1. US in recent times
   - 19th century patterns
   - 20th century different from earlier
   - Various factors (completeness, contradiction)

2. Models
   - Why do we need models?
   - Road map for ideas (flow diagram)
   - Keynesian Cross Model
   - Equilibrium vs. Disequilibrium
   - Disequilibrium dynamics

(c) Matthias Kehrig
Starting in early 1980s and 1970s, net exports was roughly balanced.

\[ \frac{X}{M} + \frac{S}{T} + \frac{Y}{H} + \frac{C}{G} = 1 \]

US National Income and Product Accounts
Investment seems to just bounce up and down without any trend.

Feeling: I'm drawn by expectations.
Government expenditures down over time (but not goods and services) is going.

Graphs showing government spending and output for the US national income and product accounts.
Because financial asset side: why do foreign net inflows increase?

Deeper: financial asset side: with all that $\downarrow$

US financial side: $\frac{Y}{G}$

Early 1980s output ratio starting in the consumption to something happened.
Possible explanation

1. Technology has removed a barrier from foreign ownership of US financial assets. So, they jump on them.

C/Y 1 Because the value of Americans' financial assets jumped and they didn't need to save anymore.

Optimistic

2. Fear that foreigners will suddenly stop being nice.

Pessimistic

American stopped saving because it's lazy. Foreigners were nice enough to make us loans.
<table>
<thead>
<tr>
<th>Year</th>
<th>Natural Defense</th>
<th>Government</th>
<th>Change from Previous Year</th>
<th>Change from Previous Year</th>
<th>Change from Previous Year</th>
<th>GDP</th>
<th>Variable</th>
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</thead>
<tbody>
<tr>
<td>2022</td>
<td>198.6</td>
<td>219.8</td>
<td>161.9</td>
<td>126.7</td>
<td>101.4</td>
<td>1945</td>
<td>1941</td>
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<td>1943</td>
<td>1942</td>
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</table>

Source: [www.bea.gov/bea/dn/nipaweb/SelectTable.asp?Selected=N](http://www.bea.gov/bea/dn/nipaweb/SelectTable.asp?Selected=N)

Government Spending and GDP: Billions of Dollars
3001 Recession

is cause.

Fiscal Business Investment

1. Y Fluctuates.
2. G up too, wise: Gπyt

I, Y up a lot! in M(M)

Questions.
Healthy to bring in foreign sector.

The can time.

Goods markets and financial markets.

Labor markets.

AS-AD

IS-LM

Labor Market

 Keynes and others

g, x, y, z

Roadmap
\[ \bar{y} = y - \bar{T} \in \text{HP} \]
\[ c_t = c_0 + c_t' \]
\[ c_t \rightarrow c_0 \rightarrow c_t' \]

Investment

Component

Changes in \( G, \bar{E} \),

Flow disrupted by

High cir. Amer.

Keynesian cross
Keynesian cross

high circular flow disturbed by changes in G, I, ...

\[ C^d \sim \text{desired, planned consumption.} \]

\[ I^d \sim \text{Investment} \]

\[ G^d \sim \text{govt spending} \]

\[ C^d = c_0 + c_1 Y_D \]

\[ Y_D = Y - T < \text{MPC} \]
$\phi = \frac{y}{x}$

$M = \frac{12 - c}{2}$

$S_0 = x - c_1 = -c_0$

$\frac{1}{2} c = \frac{c_1}{3}$

$C_0$