# ECON 4905 Cornell University Spring 2016

Karl Shell 402D Uris Hall <u>www.karlshell.com</u> karl.shell@cornell.edu

## ECON 4905 Spring 2016 Course Assistants

- Carlos Hernandez, clh265@cornell.edu
- Nicole Schmit, nrs77@cornell.edu
- Eric Schulman, ehs82@cornell.edu

# False Dichotomy

• Real Economy

versus

• Nominal (i.e. financial) economy

### Bank Runs

- Fundamental Driven
- Panic Driven

## **Role of Expectations**

- Real contracts reduce the role of panic
- Financial contracts are more "efficient" but also allow for more volatility, including panic

# General Equilibrium: Introduction to Static Pure Exchange

- Consumers, h = 1, ..., n
- Commodities, i = 1, ..., l
- Commodity consumed  $x_h^i > 0$

 $x_h \in \mathbb{R}^{l,n}_{++}$ 

- Endowment  $\omega_h^i > 0$  $\omega_h \in \mathbb{R}_{++}^{l,n}$
- Preferences  $u_h(x_h)$
- Prices  $p = \left(p^1, \dots, p^i, \dots, p^l\right) \in \mathbb{R}_{++}^l$

#### Consumer Problem

$$\max u_h(x_h)$$
  
s.t.  $p \cdot x_h = p \cdot \omega_h$   
or  
$$\sum_h p^i x_h^i = \sum_h p^i \omega_h^i$$
  
or  
$$\sum_h p^i (x_h^i - \omega_h^i) = 0$$

### *p* is an equilibrium price vector if...

$$\sum_{h} x_{h}^{i} = \sum_{h} \omega_{h}^{i} \text{ for } i = 1, \dots, l$$

where  $x_h^i$  solves Mr. h's problem for h = 1, ..., n

- *p* exists
- See books by Arrow-Hahn and Balasko. See articles by Arrow-Debreu and McKenzie.
- Walrasian equilibrium

### Welfare

- Every competitive equilibrium allocation  $x \in \mathbb{R}^{l,n}_{++}$  is Pareto optimal
- Every Pareto optimal allocation can be supported as a competitive equilibrium allocation

# Reflections

- Production
  - CRS easy
  - IRS inconsistent with CE
- Externalities
  - Failure of PO
- Non-convexities
  - Standard work week
  - King Solomon
  - Grand Tour versus in-depth visit
- Inter-temporal
  - Futures Markets versus "Money Markets"
- Uncertainty
  - Contingent claims versus Arrow securities