**Discussion Handout #12** | **TA: John Stromme**
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Prof. Eudey | Date: 12/01/17

## Goals for this session

- Understand the two-period model framework (Ch. 9 & 10)
  - How can it provide microfoundation for the aggregate consumption function?
  - How can it be used to analyze social security?

## Microfoundation of the Aggregate Consumption Function

Preliminaries: A consumption function to analyze temporary changes in income

$$C = \bar{C} + mpc \cdot Y(1-t)$$

$$C' = \bar{C} + mpc \cdot Y'(1-t')$$

- $Y$ - Change in income that is only spent today.
- $mpc$ - Marginal Propensity to Consume
- $\bar{C}$ - Permanent consumption, will consume this each period.

1. Why is $mpc = 0$ in our Ch 9 model? (i.e. what happens to consumption when there is a temporary change in income)
2. Consider the Ch 10 asymmetric info model where $r2 > r1$. Is $mpc$ still zero?
3. Financial risk tends to be counter-cyclical, given this, will the $mpc$ rise or fall during recessions?

## Social Security

4. Consider the two-period model with social security
   - $N$ - Population of old generation
   - $N'$ - Population of young generation
   - $N' = (1+n)N$
   - $t$ - tax paid by the young (note this is a lump sum tax)
   - $b$ - benefit paid out to old people
   - $N't = Nb$

   Write out and rearrange the intertemporal budget constraint to show that household budgets increase as a result of social security in this model if and only if $n > r$.
5. Moral Hazard: Some economists argue that even if social security is not economically welfare-improving, it is more efficient than potential welfare costs arising from moral hazard. Explain the moral hazard argument as it applies in this case.