

**Course:** Money and Finance I

**Professor:** Michal Kejak

**Instructions:** Deadline for submitting homework is Monday, September 10, 2005 at 1200. Submit to TA's (Frantisek Brazdik) mailbox . Please remember that any attempt by a student to represent the work of another as his or her own and knowingly allowing another student to represent your work as his or her own is considered as academic dishonesty. This includes copying the homework of another student or another work without citing the appropriate source, and collaborating with someone else in an academic endeavor without acknowledging his or her contribution.

## Homework 2

1. *Prob. 3.1 from Walsh, 2<sup>nd</sup>ed.:* **Shopping time model:** Suppose the production function for shopping takes form  $\psi = c = e^x (n^s)^a m^b$ , where  $a$  and  $b$  are both positive but less than 1 and  $x$  is a productivity factor. The agent's utility is given by  $v(c, l) = \frac{c^{1-\Phi}}{1-\Phi} + \frac{l^{1-\eta}}{1-\eta}$ , where  $l = 1 - n - n^s$  and  $n$  is time spent in market employment.
  - (a) Derive the transaction time function  $g(c, m) = n^s$ .
  - (b) Derive the money in the utility function specification implied by the shopping production function. How does the marginal utility of money depend on the parameters  $a$  and  $b$ ? How does it depend on  $x$ ?
  - (c) Is the marginal utility of consumption increasing or decreasing in  $m$ ?
2. *Prob. 3.2 from Walsh, 2<sup>nd</sup>ed.:* **Superneutrality:** Define superneutrality. Carefully explain whether the Cooley–Hansen CIA model exhibits superneutrality. What role does the CIA constraint play in determining whether superneutrality holds?