Economics 614: Macroeconomics II
Spring 2006
Cornell University
Problem Set #12
Due: Monday, April 24, 2006

1 Sunspots

2 individuals, $h = 1, 2$
2 states of nature, $s = \alpha, \beta$
1 indivisble good, $x_h \in \{0, 1\}$ for $h = 1, 2$

Let $\omega_1 = 0.4$ and $\omega_2 = 0.6$, so $\omega_1 + \omega_2 = 1$.

(a) Fully describe all possible competitive equilibria. How do these depend on $(\pi(\alpha), \pi(\beta) = 1 - \pi(\alpha))$?

(b) Replace the assumption of two states with the assumption that s is uniform on $[0, 1]$. Describe the set of competitive equilibria. What happens when moving from $s = \alpha, \beta$ to s uniform on [0,1]? What would be changed if the uniform distribution is replaced by a general continuous p.d.f. on [0,1]?

(c) Do (a) and (b) for the case $\omega_1 = 0.4$ and $\omega_2 = 0.7$, so $\omega_1 + \omega_2 = 1.1$.

2

If there is a nonstachastic competitive equilibrium that is Pareto optimal, how can it be that a sunspot competitive equilibrium is superior. Give an example.