UCLA **Fall 2016**
MGMT 239C **Prof. Mikhail Chernov**

Empirical Asset Pricing
Problem Set 5
due 12 hours before the class

Problems

1. Compute the pricing kernel for the BY2 (Bansal – Yaron with stochastic variance) model. Here I mean literally their model rather than an MA representation discussed in class:

$$\begin{aligned} g_{t+1} &= g + x_t + v_t^{1/2} w_{gt+1} \\ x_{t+1} &= \varphi_g x_t + \gamma_1 v_t^{1/2} w_{xt+1} \\ v_{t+1} &= (1-\varphi_v) v + \varphi_v v_t + \nu_0 w_{vt+1} \end{aligned}$$

   Use their calibration to characterize the implication of their model for equity premium and for the spot interest rate. Explore the sensitivity of results to the persistence of volatility (consider the value of 0.999 as an alternative).

2. Derive the pricing kernel for the extension of BY2, where consumption has SV (ARG(1)) and iid jumps in consumption growth and in the expected consumption growth. Compute entropy and horizon dependence. Comment on how the presence of jumps affects your conclusions about the models ability to generate risk premiums, match the yield curve. How sensitive are your conclusions to the specific choice of parameters? Construct the Hansen-Scheinkman decomposition of the pricing kernel. What's expected return on a console bond? What is the maximal expected return in this economy?